SERVICE MANUAL & PARTS LIST (without price)

Palm-size Personal Computer

E-100 (JX-530A)

E-105 (JX-530E)

CASSIOPEIA

MAY. 1999

E-100/105

INDEX

CASIO

Ver.1 June / 1999

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1. SPECIFICATIONS

Model: E-100/E-105

Display: 240 × 320 dots
TFT Color LCD (65,536 colors)

CPU: VR4121

Memory: 16/32MB

Interfaces: Serial: RS-232C, 115.2 kbps max.
Infrared: IrDA Ver. 1.0, 115.2 kbps (max.)
Range: 30 cm max.

Card Slot: CompactFlash card, 3.3V Type I/Type II

Headphone jack: ø 3.5 mm stereo output
Accepts monaural earphone,stereo earphones,stereo headphones.

Power Supply: Main: Rechargeable battery pack JK-210LT (Lithium-Ion battery)
AC adapter (AD-C50200)
Back-up: One CR2032 lithium battery

Power Consumption: 3.6 W

Approximate Battery Life (Normal Temperature)

Main: (Actual time may be shorter due to conditions when charging.)
6 hours: Continuous input and data display at a ratio of 1:10, with screen brightness at lowest possible level.
3 hours: Continuous communication using the optional modem card (JK-711MC56), with screen brightness at lowest possible level.

Back-up: 5 years: Main battery is charged or replaced immediately after appearance of message to replace main battery.
2 weeks(E-100): No battery replacement after appearance of message to replace main battery.
1 week(E-105): No battery replacement after appearance of message to replace main battery.

Approximate Charge Time (Normal Temperature)

5 to 6 hours: Charge time is longer for the first charges after purchasing the unit or installing a new battery pack.

Operating Temperature: 0°C to 40°C (32°F to 104°F)

Dimensions: 20H × 83.6W × 131.2D mm (3/4"H × 3 1/4"W × 5 1/8"D)

Weight: 255 g (9.0 oz)

Current consumption:

NOTES:

1. Be sure to measure after adjustment referring to **6.ADJUSTMENT** of this manual.
2. When measuring these current, be sure to use suitable range analog ammeter.

Operation Mode	Input	Current consumption
Main menu of **OPERATION CHECK** in this manual	Rechargeable Battery : 4.0V ± 0.1V	≤280mA
5. POWER CONTROL of **OPERATION CHECK** of this manual	Rechargeable Battery : 4.0V ± 0.1V	≤600mA
5. POWER CONTROL of **OPERATION CHECK** of this manual	AC Adapter : 5.0V ± 0.1V	≤600mA
Power/OFF	Rechargeable Battery : 4.0V ± 0.1V	≤1.4mA (E-100) ≤1.8mA (E-105)
Power/OFF	Lithium battery for Back-up 3.0V ± 0.1V	≤950μA (E-100) ≤1.3mA (E-105)

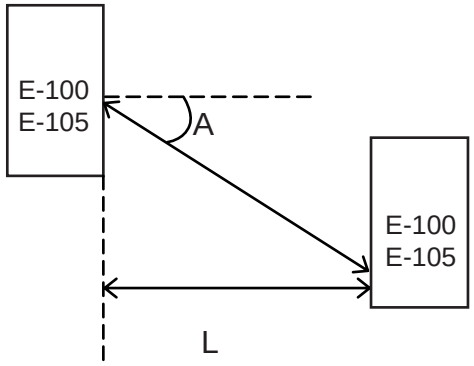
MAIN Battery = Rechargeable Battery (Lithium-Ion battery)

Voltage Detectors: (Refer to **CIRCUIT EXPLANATION** of this manual.) :

VDET1B : 3.4 V ± 1% (Low battery message Rechargeable battery)
VDET2 : 3.2 V ± 1% (Forced power off)
VDETS : 2.7 V ± 1% (Low battery message for Back-up battery)

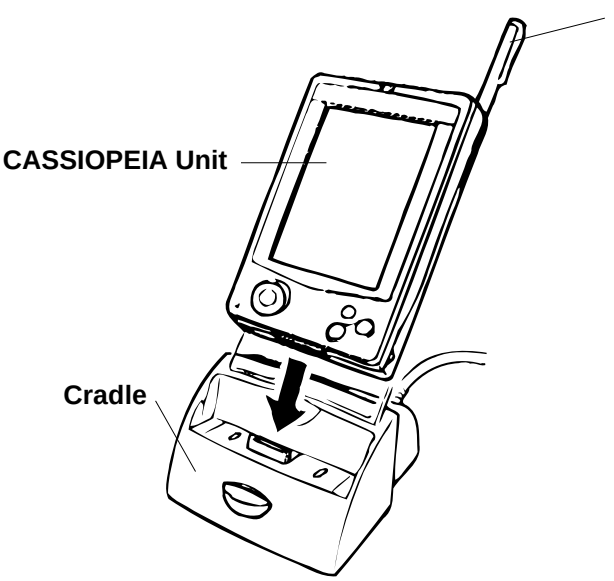
Operation Condition for Data transfer using IrDA :

Length (L)	Angle (A)
L ≤ 32 cm	A ≤ ±15°



2. UNPACKING

Refer to **15. EXPLODED VIEW** of this manual.
Check to make sure that all the items listed below are included.



- Rechargeable Battery Pack
- AC Adapter
- Soft Case
- Two Manuals (Hardware Manual,Palm-size PC User's Guide)
- User Registration Card
- Microsoft Windows CE CD-ROM
- CASSIOPEIA CD-ROM (E-105 only)
- MS AUDIO CD-ROM (E-105 for U.S.A / CANADA/ for Europe & U.K. (not supplied for spare part))
- AUDIBLE CD-ROM (only U.S.A / CANADA) (This CD-ROM is not supplied as the spare parts.)

The cradle consists of two separate parts, a base and a back support, which are packed separately. Assemble the two parts as shown in the illustration above.

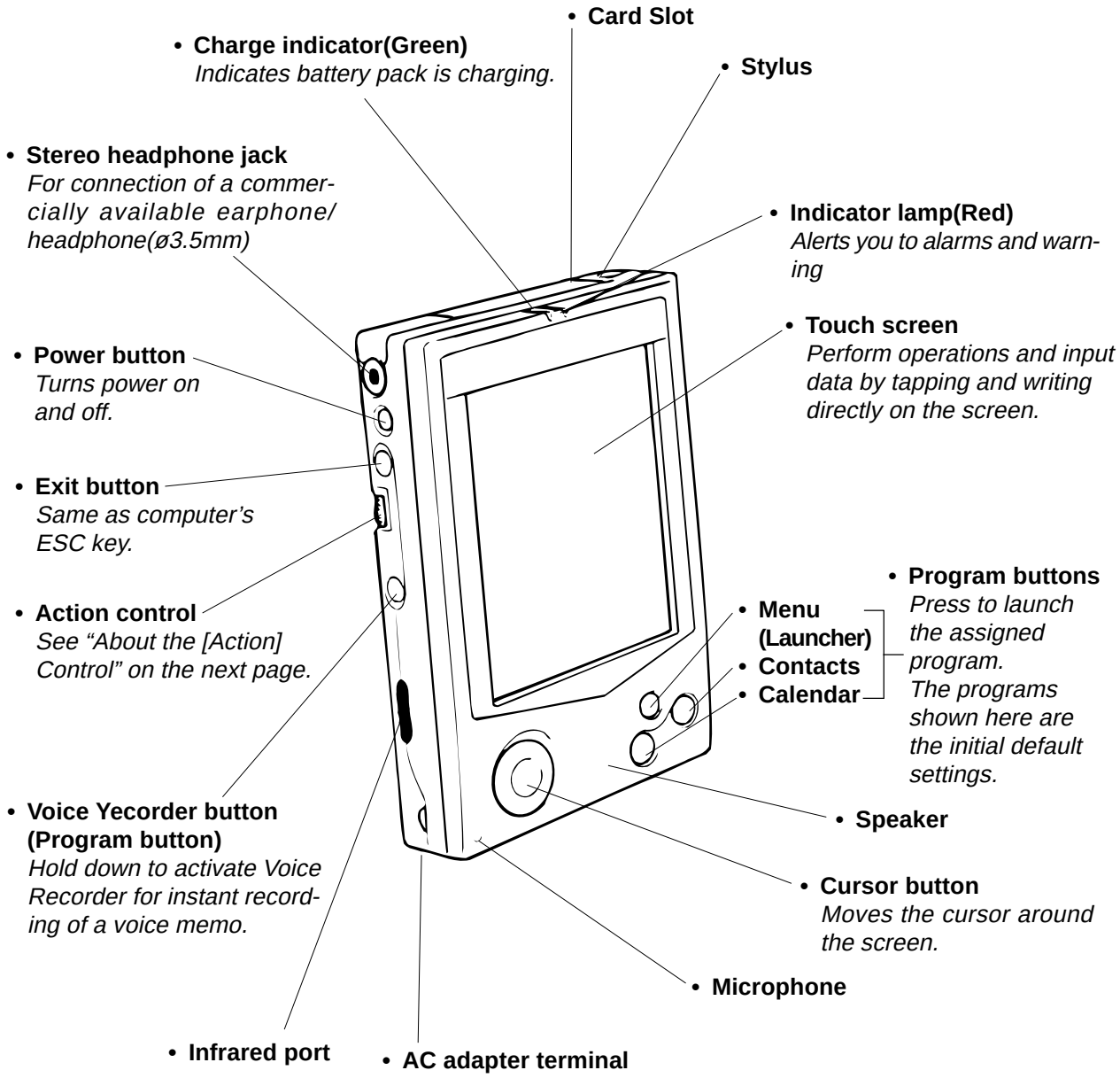
Fill out and send in the User Registration Card to become eligible to receive various support services!

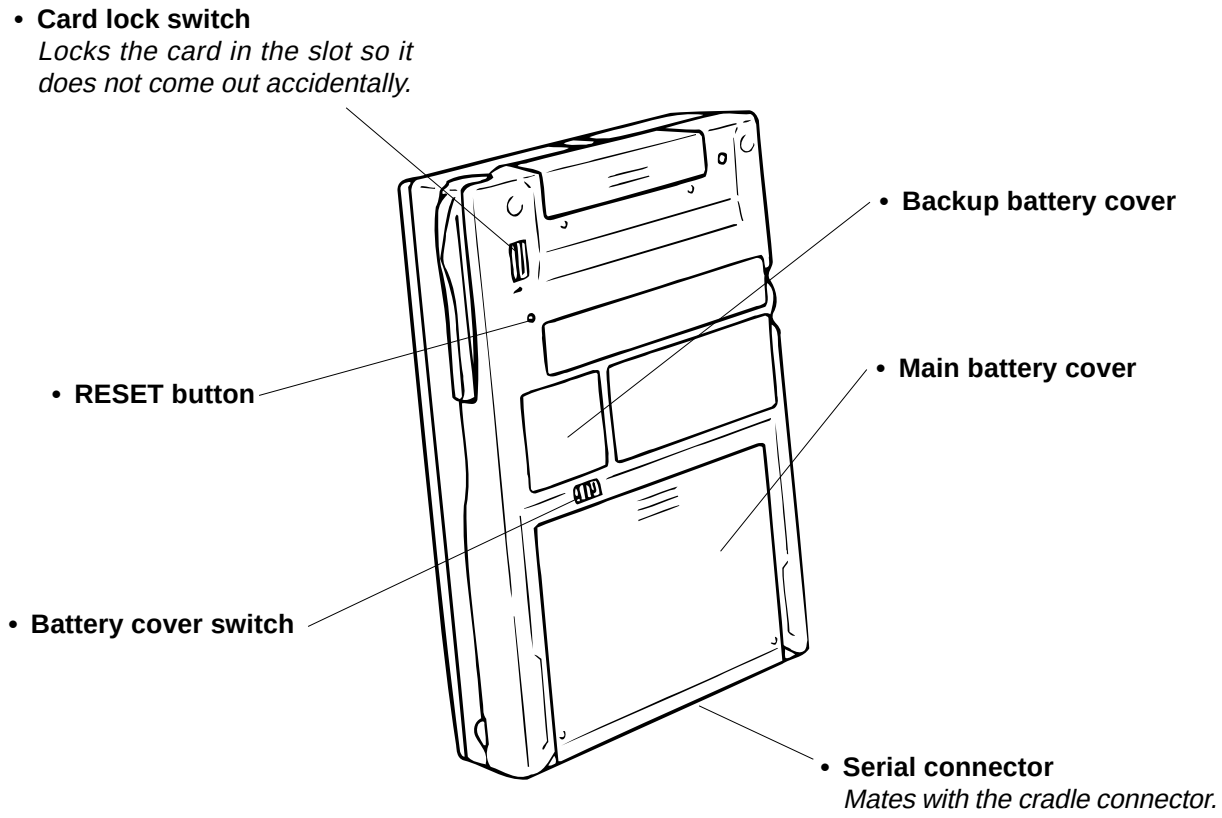
NOTE

- A Floppy Disk will be temporarily enclosed in E-100 at the time of early shipment. This diskette is preliminary one. Refer to README in this diskette for detail.

3. GENERAL GUIDE and INITIAL SETUP

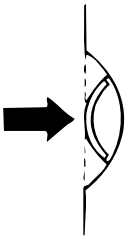
3-1. General Guide


• Card Slot
• Charge indicator(Green)
Indicates battery pack is charging.
• Stylus
• Stereo headphone jack
For connection of a commercially available earphone/ headphone(ø3.5mm)
• Indicator lamp(Red)
Alerts you to alarms and warning
• Touch screen
Perform operations and input data by tapping and writing directly on the screen.
• Power button
Turns power on and off.
• Exit button
Same as computer's ESC key.
• Action control
See "About the [Action] Control" on the next page.
• Program buttons
Press to launch the assigned program.
The programs shown here are the initial default settings.
• Menu (Launcher)
• Contacts
• Calendar
• Voice Yecorder button (Program button)
Hold down to activate Voice Recorder for instant recording of a voice memo.
• Speaker
• Cursor button
Moves the cursor around the screen.
• Microphone
• Infrared port
• AC adapter terminal

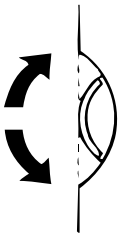

• Card lock switch
Locks the card in the slot so it does not come out accidentally.
• Backup battery cover
• RESET button
• Main battery cover
• Battery cover switch
• Serial connector
Mates with the cradle connector.

About the [Action] Control

Operations can be performed by pressing and rotating the [Action] control.



Pressing the [Action] control performs an operation similar to the Enter key of a computer keyboard.



Rotating the [Action] control performs operations similar to the up and down arrow keys of a computer keyboard.

See the *Palm-size PC User's Guide* for full details on [Action] control operations inside of specific applications.

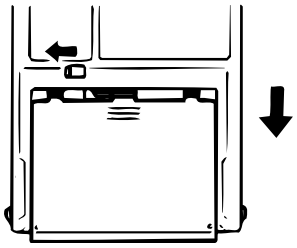
3-2. Initial Setup

Perform the following initial setup procedure after repair.

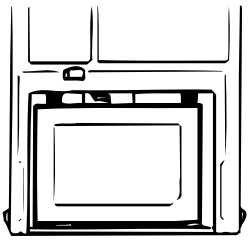
1. Load the main battery (rechargeable battery pack).

Be sure to use the AC Adapter to charge the rechargeable battery pack before doing anything else. Your CASSIOPEIA will not operate correctly if you load the backup battery before charging the battery pack.

① Slide the battery cover switch to MAIN and remove the main battery cover.



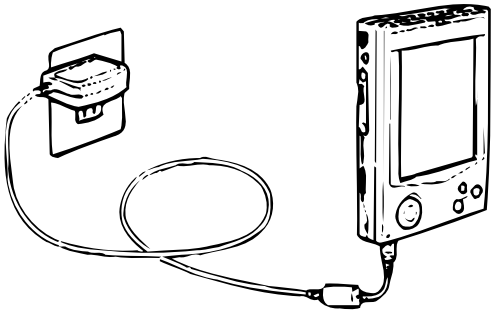
② Install the rechargeable battery pack that comes with the CASSIOPEIA. Make sure that the battery pack is oriented correctly.



③ Replace the main battery cover.

④ Slide the battery cover switch to LOCK.

2. Use the AC Adapter to charge the battery pack for about five or six hours.
   - Connect the AC Adapter to the CASSIOPEIA as shown in the illustration.

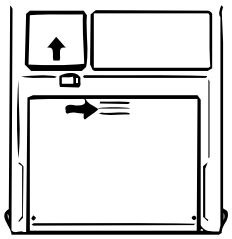


- Charging starts automatically as soon as you connect the AC Adapter to the CASSIOPEIA .
- The charge indicator is green while charging is in progress. It goes out when charging is complete.
- It takes about five or six hours to reach full charge.
- The time required to reach full charge may be longer the first time you charge the battery pack after purchasing it.

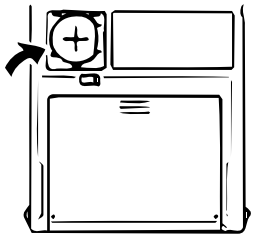
Remove the AC Adapter from the CASSIOPEIA after charging is complete.

3. Load the backup battery (CR2032).

① Slide the battery cover switch to BACK UP, and then remove the backup battery cover.



② After wiping both side of a new lithium battery (CR2032) with a dry cloth, place it into the battery compartment with the positive side facing up (so you can see it).



③ Replace the backup battery cover and slide the battery cover switch back to LOCK.

4. Let the CASSIOPEIA rest for about five seconds, and then press the [Power] button.
   - After a few moments the Microsoft Windows CE screen appears, press the [Action] control to advance to the next screen.

5. Tap the cross marks that appear on the display to calibrate the touch screen.
   - Tap the cross marks as they appear. After calibration is complete, press the [Action] control to advance to the next screen.

6. Follow the instructions that appear on the screen to set your city, the current date, and the current time.
   - Microsoft Windows CE screen appears with a message telling that setup is complete. Tap the screen to display the Active Desktop.
   - See the *Hardware Manual* and *Palm-size PC User's Guide* for other information about operating the CASSIOPEIA.
   - Be sure to press the [Power] button to turn off power after you are finished using your CASSIOPEIA.
   - You also need to install Windows CE Services before you can communicate with a desktop computer.

Important ⚠

- If the touch panel does not respond when you tap it or if nothing appears on the display, try performing a full reset (next page). If this does not restore proper operation, remove the main battery and the backup battery and wait for about five minutes. Reload the main battery first and then the backup battery, and perform the above procedure again from step 4.
- See **4-2. Battery Replacement** for important information about replacing batteries.
- If the message "A problem with memory contents has been found..." appears on the display, perform a full reset (next page).

Adjusting the Display

To do this:	Perform this operation:
Make contrast darker	[Exit] + Cursor up
Make contrast lighter	[Exit] + Cursor down
Increase brightness	[Exit] + Cursor right
Decrease brightness	[Exit] + Cursor left

■ Full Reset (Memory Initialize)

Full reset (memory initialize) deletes all data, and resets all unit parameters to their initial defaults. The following are conditions when you should perform a full reset.

- When you want to delete all memory data and return unit settings to their factory defaults.
- When you forget your password and need to clear it.
- When a data error causes operational problems.
- Appearance of the message: “A problem with memory contents has been found…”.

Important ⚠

- If there is a CompactFlash card in the CASSIOPEIA's slot, remove the card before performing the full reset.
- The following procedure deletes all data in memory. Be sure that data is backed up or that you no longer need it before performing the following procedure.

1. Make sure that unit power is turned on.

2. While holding down the [Power] button, use the stylus to hold down the RESET button for about two seconds.
   - This causes the following message to appear on the display screen.

   > Proceeding with this operation initializes memory. Press [Action] to proceed or [Exit] to cancel.

3. Press the [Action] control.
   - This causes the following message to appear on the display screen.

   > Proceeding with this operation deletes all data stored in memory. Press [Action] to proceed or [Exit] to cancel.

4. Press the [Action] control again.
   - This starts the full reset operation, which deletes all data in memory.
   - Pressing the [Action] control displays the Startup screen followed by the touch screen calibration screen.

You can abort the full reset operation while the messages in steps 2 and 3 are on the display by pressing the [Exit] button.

> If a full reset does not correct the problem, remove the main battery and the backup battery and leave them out for about five minutes. Next, restart the setup operation from step 1. Make sure that the positive (+) and negative (–) terminals are oriented correctly when you reload them into the unit.

4. RESET OPERATION and BATTERY REPLACEMENT

4-1. Reset Operation

“Reset” is similar to a computer reboot. Performing a reset deletes any data that is in the process of being input or edited, without yet being saved. Data stored in memory and all settings, however, are retained.
Perform the reset operation whenever the unit fails to operate correctly due to operational error or some other abnormality. Any of the following symptoms indicate that reset is required.

- Failure of the unit to respond when the screen is tapped or a button is pressed.
- The hourglass icon remaining on the screen.

Performing a Reset

1. Use the stylus to press the RESET button.
   - The unit performs a reset followed by a memory check operation.
     If no data error is found, the following two screens appear on the display in succession.
     - Startup screen
     - Desktop
2. Normal unit operation is possible after the desktop appears.
   - Since memory data and settings are retained, you can continue operation from where you last left off.

Important ⚠

- If the above operation does not solve the problem, perform a full reset (memory initialize page 8).

4-2. Battery Replacement

You CASSIOPEIA is powered by a dual power supply that consists of a main battery (rechargeable battery pack) and a backup battery (CR2032 lithium battery).

- We recommend that you use the **Power** properties dialog to keep informed about the current levels of your main and backup batteries. See the separate Palm-size PC User's Guide for more information about this dialog.
- Icons appear in the Taskbar to let you know when battery power is low. See the separate *Plam-size PC User's Guide* for more information about these icons.

Important ⚠

The following messages appear whenever battery power drops below a certain level.

Main Battery

Recharge the battery pack as soon as possible after the following message appears.
"Prevent possible data loss by promptly replacing or recharging your main batteries according to your hardware manufacturer's instructions."

Backup Battery

Replace the backup battery as soon as possible after the following message appears.
"Prevent possible data loss by promptly replacing or recharging your backup battery according to your hardware manufacturer's instructions."

- Data stored in memory can be lost if you continue operation after the low battery message appears or if you incorrectly load batteries. Be sure to always back up important data on your desktop computer hard disk or on a CompactFlash memory card. See the separate *Palm-size PC User's Guide* for information about backing up data.
- See the separate *Plam-size PC User's Guide* for information about using the Card Backup Tool program to back up data to a CompactFlash memory card.
- Never remove the main battery and backup battery from the CASSIOPEIA at the same time. Doing so causes all data stored in memory to be deleted.
- Should the main battery and the backup battery both require replacement, be sure to always replace the main battery first.
- Use the rechargeable battery pack for the main battery and a CR2032 lithium battery for the backup battery. Never use any other type of batteries.

If unit power turns off due to insufficient power, the following warning message appears on the display the next time you turn on unit power.
"Warning
Due to high current demand by hardware, the system powered down in order to protect memory contents..."

If unit power turns off due to sudden power drain by a CompactFlash card, the following warning message appears on the display the next time you turn on unit power.
"Warning
Due to high current demand by the card, the system powered down in order to protect memory contents..."

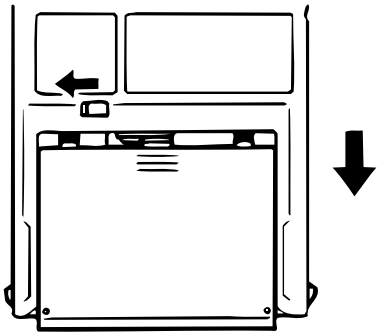
Important ⚠

Be sure to observe the following important battery handling precautions. Failure to do so can cause batteries to leak, resulting in damage to surrounding items and create the danger of fire and electrical shock.

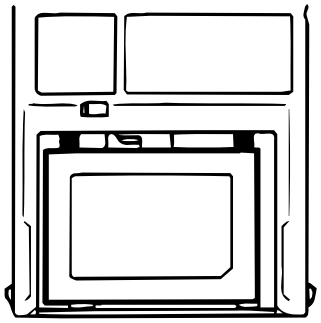
- Always make sure that the positive (+) and negative (–) poles of the batteries are oriented correctly.
- Use only the types of batteries specified for use with this unit.
- Charge the battery pack in an area where the temperature is between 10˚C (50˚F) and 35˚C (95˚F). Charging in areas that are very cold or exposed to direct sunlight can cause deterioration and leaking of the battery pack.
- To avoid deterioration and leaking, the battery pack is designed to discharge even when you do not use the CASSIOPEIA. Be sure to recharge the battery pack at least once every three months, regardless of how much you use the CASSIOPEIA during that time.
- A battery pack that loses power too quickly after it is charged is probably near the end of its service life. In such a case, you have to purchase a new battery pack.

Replacing the Main Battery

1. Make sure your CASSIOPEIA is turned off.
   - Press the [Power] button to turn off power.
2. Turn the CASSIOPEIA over.
3. Slide the battery cover switch to MAIN, and then remove the main battery cover.



4. Remove the main battery and then load a new battery pack.
   - Make sure the battery pack is oriented correctly.



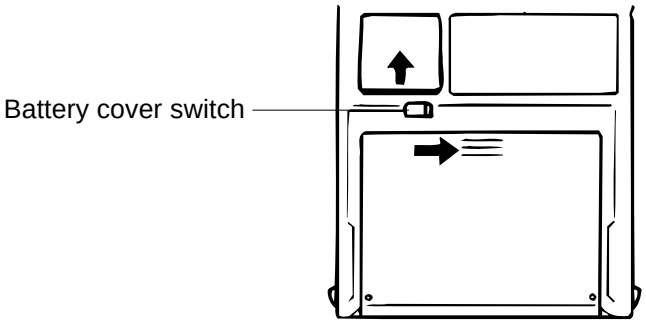
5. Replace the main battery cover.
6. Slide the battery cover switch to LOCK.

Replacing the Back-up Battery

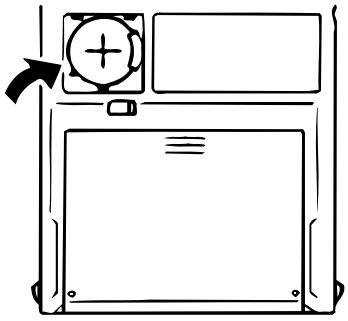
Important ⚠

- Never remove the main battery and back-up battery from the CASSIOPEIA at the same time. Doing so causes all data stored in memory to be deleted.
- Should the main battery and the back-up battery both require replacement, be sure to always replace the main battery first.
- Be sure to replace the back-up battery as soon as possible whenever the following message appears on the display: "**Prevent possible data loss by promptly replacing or recharging your back-up battery according to your hardware manufacturer's instructions**".

1. Make sure your CASSIOPEIA is turned off.
   - Press the [Power] button to turn off power.
2. Turn the CASSIOPEIA over.
3. Slide the battery cover switch to BACK UP, and then remove the backup battery cover.



4. Remove the old battery.
5. Wipe off a new lithium battery (CR2032) with a dry cloth, and load it into the CASSIOPEIA.

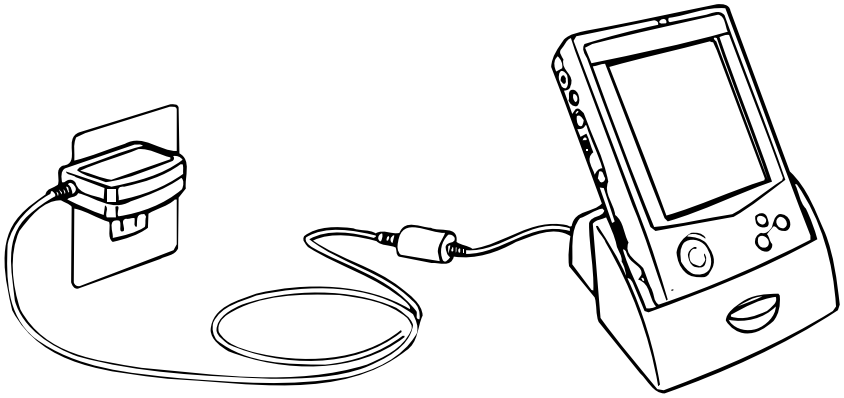


Make sure the positive side is facing up, so you can see it.

6. Replace the back-up battery cover.
7. Slide the battery cover switch back to LOCK.

Charging the Battery Pack

1. Install the battery pack into the CASSIOPEIA.
2. Attach the AC adapter to the cradle and place the CASSIOPEIA onto the cradle.



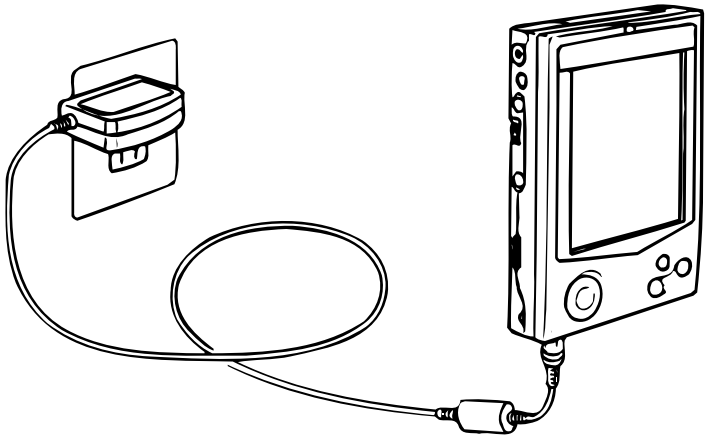
- Charging starts automatically as soon as you place the CASSIOPEIA onto the cradle.
- The charge indicator is green while charging is in progress. It goes out when charging is complete.
- It takes about **five or six hours** to reach full charge if this pack is entirely discharged.
- You can use your CASSIOPEIA while the battery pack is charging.

Important ⚠

- Do not use the CASSIOPEIA while it is charging for the first time after you purchased it or for the first time after you installed a newly purchased battery pack.
- If the battery pack dose not achieve full charge after the nomal charge time, remove the CASSIOPEIA or unplug the AC adapter from the cradle to stop charging.

Remove the CASSIOPEIA from the cradle after charging is complete.

The followeing illustration shows how to connect the AC adapter directly to the CASSIOPEIA for charging.



- Charging starts automatically as soon as you attach the AC adapter to the CASSIOPEIA.
- Direct connection charging conditions are the same as those described for cradle charging above.

5. DATA TRANSFER

5-1. General

There are basically four kinds of data transfers concerning E-100/105.

1. Data transfer between PC and E-100/105 using the software of Windows CE Services (Ver. 2.2) refers to **Memory Backup/ Restore** described in latter page concerning this transfer.
2. Data transfer between E-100/105 and Compact Flash memory card refers to **Card Backup Tool** described in latter page concerning this transfer. It is recommended that CF-15 (15MB)/ CF-30 (30MB) is used for this transfer.
3. Infrared Communications - For example, data transfer between a E-100/105 and another E-100/105 unit using IrDA.
4. Modem communication using the optional modem (JK-711MC56) (U.S. and Canada Only) refers to User's Guide for JK-711MC56 concerning this modem.

NOTE:

■ It is recommended that AC adapter is used at the time of data transfer by item 1 ~ 4 described above.

■ **Important!**

Data saved in E-100/105 will be deleted by electrical shock (Static Electricity, External Nose and so on) or the other reasons. Be sure to save data in PC or Compact Flash memory card usually using data transfer by item 1 and 2 described above.

"Card Backup tool" is the software developed to prevent from this trouble.

5-2. Data transfer between PC and E-100/105

■ **Required System Configuration**

The minimum system configuration required to connect the cradle and perform data communications is described below. This system configuration also makes it possible to install and use Windows CE Services, which is included on the Microsoft CD-ROM provided with the unit.

Minimum Desktop Computer Requirements

- Microsoft Windows NT Workstation 4.0 or Windows 95/98 (U.S.version)
- Desktop computer with a Pentium processor for Windows NT.
- Desktop computer with a 486/66 DX or higher processor (Pentium P90 recommended) for Windows 95/98
- 16 MB of memory for Windows 95/98 (More memory improves performance.) or Windows NT Workstation 4.0 (32 MB recommended for Windows NT)
- Hard disk drive with 10 to 50 MB of available hard disk space (Actual requirements vary based on selection of features and user's current system configuration)
- Available 9 or 25 pin communications port (adapter required for 25 pin communication port)
- One CD-ROM drive
- VGA or higher-resolution graphics card (Super VGA 256-color recommended)
- Keyboard
- Microsoft Mouse or compatible pointing device

Options for either Windows NT Workstation 4.0 or Windows 95/98

- Audio card/speakers for sound
- Microsoft Office 97 or Microsoft Office 95
- Serial or built-in infrared adapter for synchronization (Windows 95/98 only)
- Modem for remote synchronization
- Ethernet LAN connection for remote synchronization

Requirements for Mobile Channels Support

- Micorosoft Internet Explorer 4.0 (included on CD), which requires 40 MB to 70 MB of hard disk space and a minimum 486/66 processor. Service Pack 3 (or higher) is required for Windows NT systems (included on CD).

NOTE:

Different minimum system requirements are required when using the applications included on the CASSIOPEIA CD-ROM. See the documentation contained on the CD-ROM for full details.

■Memory Backup / Restore

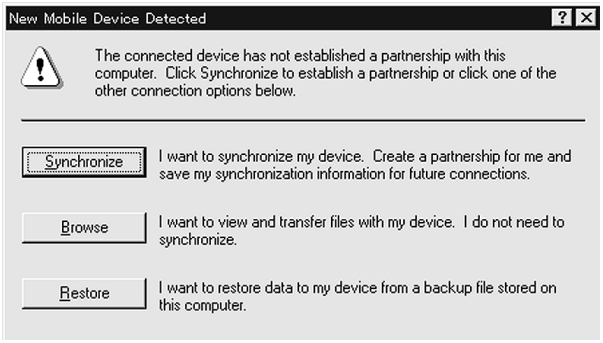
Make the backup copy by Windows CE Services 2.2 to your PC before repairing E-100/105, and restore the data from PC to user's E-100/105 after repairing.
For the details of Backup/ Restore, refer to User's Guide for the Palm-size PC .

Notes:

1. **Backup program of Windows CE Services 2.2 back up only files and databases. The data entered in Owner, World Clock mode and so on can not be backed up to PC.**
2. **Use AC adapter when making backup copy and restoring.**
3. **It is necessary to install Windows CE Service 2.2 to PC before these data transfer. Refer to User's Guide for Palm-size PC concerning the installation of Windows CE Service 2.2.**

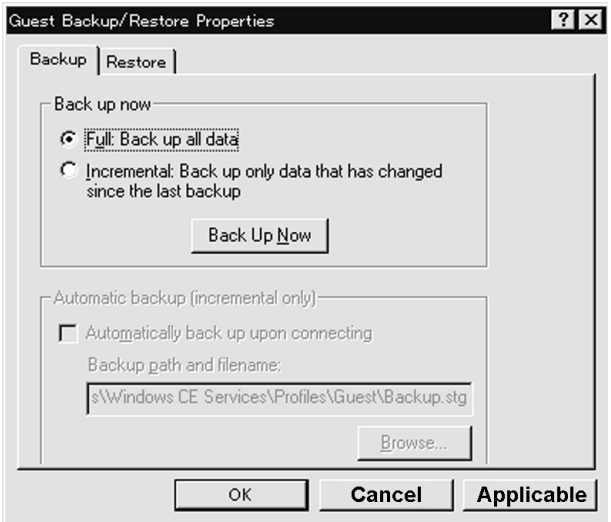
Backup

1. Connect E-100/105 to your PC with the cradle.
2. Clicking Mobile Devices icon, start Windows CE Services 2.2 on your PC.
3. Windows CE Services 2.2 automatically detects E-100/105 connected to PC.
4. The following screen will be displayed.

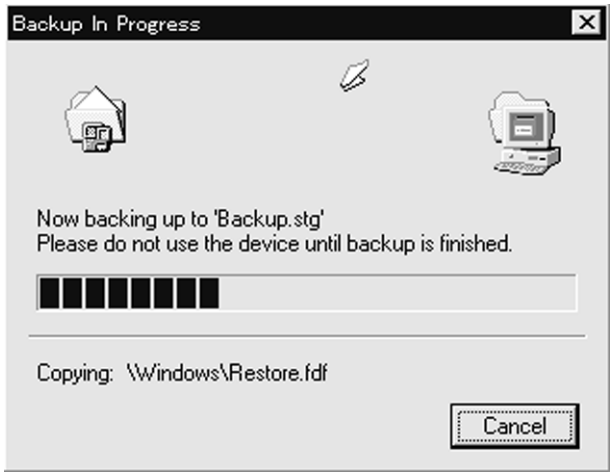

New Mobile Device Detected
The connected device has not established a partnership with this computer. Click Synchronize to establish a partnership or click one of the other connection options below.
Synchronize
I want to synchronize my device. Create a partnership for me and save my synchronization information for future connections.
Browse
I want to view and transfer files with my device. I do not need to synchronize.
Restore
I want to restore data to my device from a backup file stored on this computer.

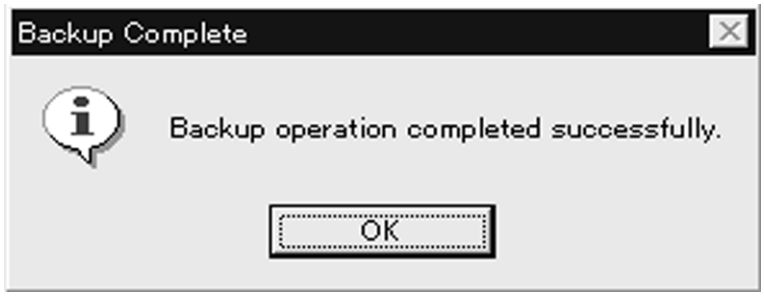
5. Selecting "**Browse**", the following **Guest** icon will be automatically displayed on the screen. If not displayed, select **Palm-size_PC**, and then return to this top menu of **Mobile Devices** again.

6. Select "**Backup/Restore....**" from "**Tools**" pop up menu.
7. Select "**Full: back up all data**", then click "**Back Up Now**" button.



8. Confirm the file name of back up copy (Backup.stg). Remember or record the directory which its file is backed up also. For example: C\Program File\Windows CE Service\Profiles\Guest\Backup.stg
And then, after selecting **OK** button, Full Backup starts.

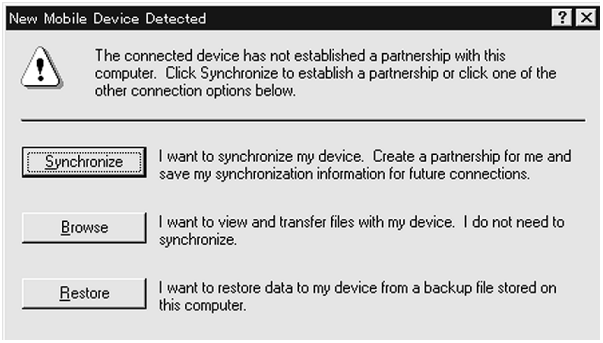

Backup In Progress
Now backing up to 'Backup.stg'
Please do not use the device until backup is finished.
Copying: \Windows\Restore.fdf
Cancel



Restore

Perform the following procedure for restoring after repair.

1. Turn on E-100/105.
2. After pressing **Action** button while holding down **Power** button, perform touch panel calibration on E-100/105, and then skip the other setups after calibration (**Full RESET**).
3. Connect E-100/105 to your PC with the cradle.
4. Window CE Services 2.2 automatically detects E-100/105 connected to PC.
5. Clicking **Mobile Devices** icon, starts Windows CE Services 2.2 on your PC.
6. The following screen will be displayed.


New Mobile Device Detected
The connected device has not established a partnership with this computer. Click Synchronize to establish a partnership or click one of the other connection options below.
Synchronize
I want to synchronize my device. Create a partnership for me and save my synchronization information for future connections.
Browse
I want to view and transfer files with my device. I do not need to synchronize.
Restore
I want to restore data to my device from a backup file stored on this computer.

Selecting "**Browse**", the following **Guest** icon will be automatically displayed on the screen.
If not displayed, select Palm-size_PC, and then return to this top menu of **Mobile Devices** again.

7. Select "**Backup/Restore....**" from "**Tools**" pop up menu.
8. Selecting "**Restore**", the following screen appears.

Guest Backup/Restore Properties
Backup
Restore
Performing a restore allows you to return your device to the state it was in when you last did a backup. This operation should be used only as a last resort as it removes all current files and data from your device.
To restore successfully, quit all programs on your device. Then click Restore Now.
Do not use your device until after the restore has completed.
Restore Now
OK
Cancel

9. After selecting **Restore Now** button, the following screen will appear.

Partnership Profile Selection
Select the partnership profile in the list below that contains your backup file. Click Browse if your backup file is not stored with your profile.
Guest
Palm-size_PC
Browse...
OK
Cancel

10. Detect **Back up.stg** file using **Browse...** button. After you succeed in this detection, the following screen appears.

11. Selecting **OK** button, the following screen will appear.

Proceed with Restore?
Restore will remove all current data from your device. Your data will be returned to the state it was when this backup file was last updated.
Note: You cannot cancel restore after it has been started.
Proceed with Restore?
Cancel
Restore

12. After selecting **Restore** button, the data transfer from PC to E-100/105 starts.

Restore In Progress
Now restoring from 'Backup.stg'
Please do not use the device until restore is finished.
Copying: \Windows\Restore.fdf

13. The following screen will appear after this data transfer.

Restore Complete: Restart device
Restore complete. You must disconnect and then reset your device for these changes to take effect.
Consult your manufacturer's documentation for instructions on resetting your device.
Note: When you reconnect, ActiveSync may prompt you to combine or discard items in any synchronized databases (Appointments, Contacts, or Tasks).
OK

Finally, click **OK** button.

■At present, there are four kinds of Compact Flash memory cards as follows.
CF-2 (2MB)/ **CF-4** (4MB)/ **CF-10** (10MB)/ **CF-15** (15MB)/ **CF-30** (30MB)/ **CF-48** (48MB)

■**How to save the data to Compact Flash memory card without PC**
(Applicable to only "Note Taker" and "Voice Recorder" mode as well as E-10/ E-15)

< PROCEDURE >

1. Note Taker

(1) Tap **Start**, and then **Note Take**.

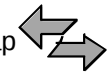
(2) Tap icon, **Tools**, **Options**, and then **Columns**.

(3) Select **Location**.
(4) Tap **Save**, and then select **Save to storage card**.
(5) Tap **OK**.
(6) Make any new file.
(7) Confirm that Location is set to **Storage C...**.

* Removing Compact Flash memory card (CF card), data saved in E-100/105 will disappear. After inserting CF card into slot of E-100/105 again, open **Note Taker**, tap **File**, and then tap **Select All**. Doing so, data will appear again.

2. Voice Recorder

① Tap **Start**, and then **Voice Recorder**.

② Tap  icon, **Tools**, **Options**, and then **General**.

③ Select **Save to storage card**, and then tap **Columns**.
④ Select **Location**, and then tap **OK**.
⑤ Make any new file.
⑥ Confirm that Location is set to **Storage C...**.

* Removing Compact Flash memory card (CF card), data saved in E-100/105 will disappear. After inserting CF card into slot of E-100/105 again, open **Voice Recorder**, tap **File**, and then tap **Select All**. Doing so, data will appear again.

■**Card Backup Tool**

In the CD-ROM of item 60 (SOFTWARE/CD-ROM (CASIO)) described in PARTS LIST of this Service Manual, there is User's Guide for "**Card Backup Tool**" software.
After set this CD-ROM to your PC, open the holders as follows;

Bonus Software> Card Backup Tool> View User's Guide

■ User's Guide for Card Backup Tool

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Introduction

Card Backup Tool lets you quickly and easily back up your CASSIOPEIA memory data to a memory card. Backed up data lets you easily restore your system should it start to malfunction due to some data error.

Backed Up Data

Card Backup Tool backs up the following three types of data in CASSIOPEIA memory.

- Files
  Files are created using Voice Recorder, Note Taker, and other applications and add-on programs. Files transferred from your desktop computer to the CASSIOPEIA are also backed up.
- The Registry
  The registry contains setup data for Windows CE and built-in applications.
- Database Data
  Database data is Calendar, Contacts, Tasks, and Inbox data.

Time Required for Backup

Depending on the volume of data you are backing up (or restoring), the backup operation can take anywhere from about 10 seconds to a number of minutes. To back up 4MB of data, for example takes three or four minutes. To check how much data is on your system, tap [Start], [Settings], and then [System]. On the dialog that appears, tap the [Memory] tab. The value under [Storage memory] indicates how much data is stored in memory. See the *Palm-size PC User's Guide* and CASSIOPEIA online help for more information.

Important! ⚠

- The restore operation can take a very long time if you do not have enough storage memory allocated. When this happens, quit the restore operation, increase the size of the storage memory, and then try the restore operation again.

Using Card Backup Tool

This section provides details about the backup and restore operations you can perform using **Card Backup Tool.** Be sure to read the following precautions before using **Card Backup Tool** for either backup or restore.

Read this first!

- Always reset your CASSIOPEIA before backing up or restoring data. Make sure you perform a reset operation. Do not perform a full reset operation!
  See the separate *Hardware Manual* for information about how to reset your CASSIOPEIA.
- Be sure to power your CASSIOPEIA with the AC adapter whenever performing a backup or restore operation.
- If main battery or backup battery power is low when you start a backup or restore operation, a warning message appears and the backup or restore operation is cancelled. Before starting a backup or restore operation, charge the battery pack or load new batteries.
- Do not perform any button or screen operations on the CASSIOPEIA while a backup or restore operation is in progress. Do not touch the CASSIOPEIA at all until the backup or restore operation is complete.
- Files and other data are automatically compressed before it is stored in CASSIOPEIA memory. Make sure the memory card you are using for backup has enough unused space to store the data.

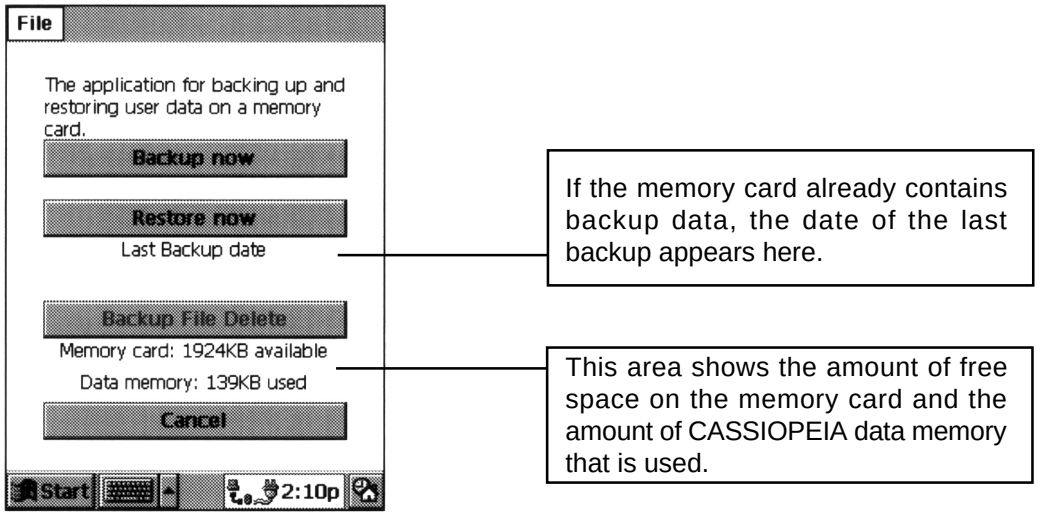
Backing Up Data

Use the following procedure to back up data. Make sure you read the precautions under "Read this first!" on the previous page before starting.

To back up data

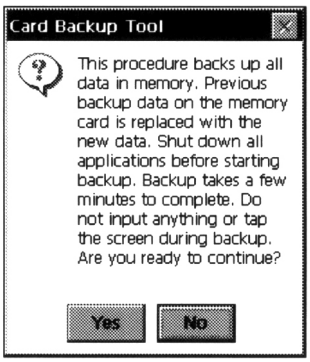
1. Connect the AC adapter to your CASSIOPEIA.
2. Reset the CASSIOPEIA.
3. Insert a memory card with sufficient free space to store the backup data into the CompactFlash card slot of the CASSIOPEIA.
4. Tap [Start], [Programs], [Utility], and then [Card Backup].

- This starts up Card Backup Tool and causes the dialog shown below to appear.


File
The application for backing up and restoring user data on a memory card.
Backup now
Restore now
Last Backup date
Backup File Delete
Memory card: 1924KB available
Data memory: 139KB used
Cancel
Start
2:10p
If the memory card already contains backup data, the date of the last backup appears here.
This area shows the amount of free space on the memory card and the amount of CASSIOPEIA data memory that is used.

5. Tap [Backup now].

- This causes the dialog shown below to appear.


Card Backup Tool
This procedure backs up all data in memory. Previous backup data on the memory card is replaced with the new data. Shut down all applications before starting backup. Backup takes a few minutes to complete. Do not input anything or tap the screen during backup. Are you ready to continue?
Yes
No

6. Tab [Yes] to start the backup or [No] to close the dialog without backing up anything.

- An hourglass icon on the screen indicates that the backup operation is being performed.
- The message "Backup complete!" appears on the display after the backup operation is complete.

7. After backup is complete, tap [OK] to quit Card Backup Tool.

Note

- If the backup operation is interrupted or unsuccessful for any reason and there is a previous backup file on the memory card you are using, the previous file remains intact on the card.

To interrupt a backup operation

1. Tap the [x] close button in the upper right corner of message box that is on the screen while a backup operation is in progress.
- This causes the message "Do you really want to cancel?" to appear.
2. Tap [Yes] to cancel the backup operation or [No] to resume it.

Restoring Data

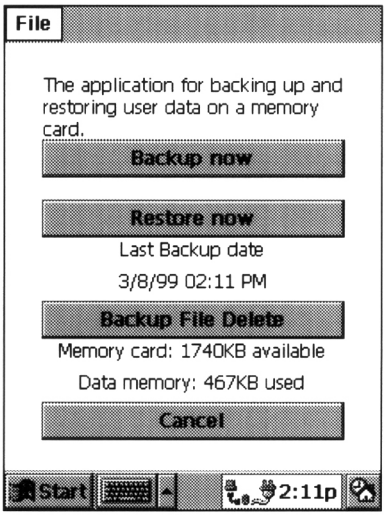
Performing the restore operation causes the following to happen.

- If the same file or registry data exists in both CASSIOPEIA memory and on the memory card, the data in CASSIOPEIA memory is overwritten with the data on the memory card.
- Any files or registry data in CASSIOPEIA memory that is not on the memory card is left as-is.
- Calendar, Contacts, Tasks, and Inbox data in CASSIOPEIA memory is all overwritten with the corresponding data from the memory card.
- To return CASSIOPEIA to the exact status it was when you backed up the data, perform a full reset before restoring the data. See the separate *Hardware Manual* for information about the full reset.

Use the following procedure to restore data. Make sure you read the precautions under "Read this first!" on page 21 before starting.

To restore data

1. Connect the AC adapter to your CASSIOPEIA.
2. Reset the CASSIOPEIA.
3. Insert the memory card that contains the data you want to restore into the CompactFlash card slot of the CASSIOPEIA.
4. Tap [Start], [Programs], [Utility], and then [Card Backup].
- This starts up Card Backup Tool and causes the dialog shown below to appear.



5. Tap [Restore now].

- This causes the dialog shown below to appear.

Card Backup Tool
Restore data from the backup file you created on a storage card.
Data restore takes a few minutes to complete. During that time do not input anything or tap the screen with the stylus. Do you want to continue with the data restore operation?
Yes
No

6. Tab [Yes] to start the restore or [No] to close the dialog without restoring anything.

- An hourglass icon on the screen indicates that the restore operation is being performed.
- The message "Restore complete!" appears on the display after the restore operation is complete.

7. After restore is complete, tap [OK] to quit Card Backup Tool.
8. Reset your CASIOPEIA again.

To interrupt a restore operation

1. Tap the [x] close button in the upper right corner of message box that is on the screen while a restore operation is in progress.

- This causes the message "Do you really want to cancel?" to appear.

2. Tap [Yes] to cancel the restore operation or [No] to resume it.

Deleting a Backup File

You can use the following procedure to delete the backup files you created using Card Backup Tool. Delete a file when you no longer need it, when you want to free up space on a memory card, etc.

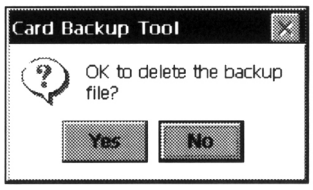
To delete a backup file

1. Insert the memory card that contains the backup file you want to delete into the CompactFlash card slot of the CASSIOPEIA.
2. Tap [Start], [Programs], [Utility], and then [Card Backup].

- This starts up Card Backup Tool.

3. Tap [Backup File Delete].

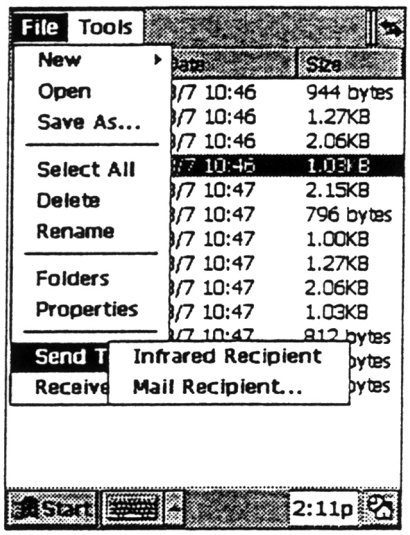
- This causes the dialog shown below to appear.



4. Tab [Yes] to delete the backup file or [No] to close the dialog without deleting anything.

5-3.Infrared Communications (Quotation from the Microsoft User's Guide)

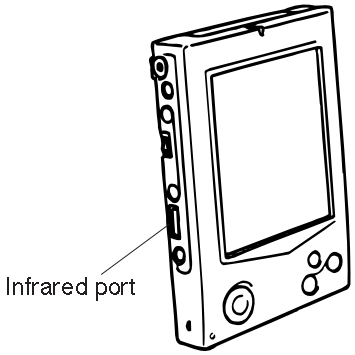
Your Palm-size PC has an infrared port that you can use to exchange information with another Windows CE device. In Contacts, for example, you can send up to 25 cards at a time to another Windows CE device. In Voice Recorder and Note Taker, you can send individual files or notes.



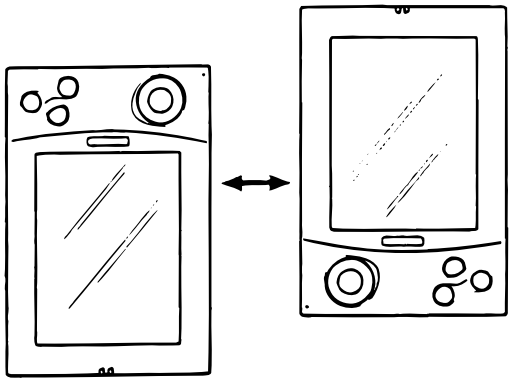
Note Taker Infrared Send Menu

To transfer data with infrared

1.Align the infrared port of your Palm-size PC with the infrared port of the other Windows CE device.



- The two infrared ports should be within about 30cm (≤32cm) from each other.



2. On the sending unit, start up the program that contains the data you want to send. Select the items you want to send, and then tap **File**, **Send To**, and then **Infrared Recipient**.

3. On the receiving unit, start up the same program, and then tap **File** and then **Receive**.

- The displays of both units show a message indicating that data transfer is being performed. Both units play a sound and display a message when transfer is complete.

6. ADJUSTMENT

There are two adjustments using variable resistors (VR300/ VR301) concerning E-100/-105.
Refer to **Main Block (3/3)** of **11. SCHEMATIC DIAGRAM** of this manual.
Before performing these adjustments, remove the lower case referring to **13. DIASSEBLY PROCEDURE** of this manual. Set the battery cover switch to **LOCK** position.
And then, after adding 4.0 ± 0.1V to the battery terminal, perform **Full RESET**.
Therefore, save Use's data to PC or Compact Flash memory card before these adjustments.

6-1. Adjustment for LCD Display (VR300)

Refer to the illustration described below.

■ **PROCEDURE**

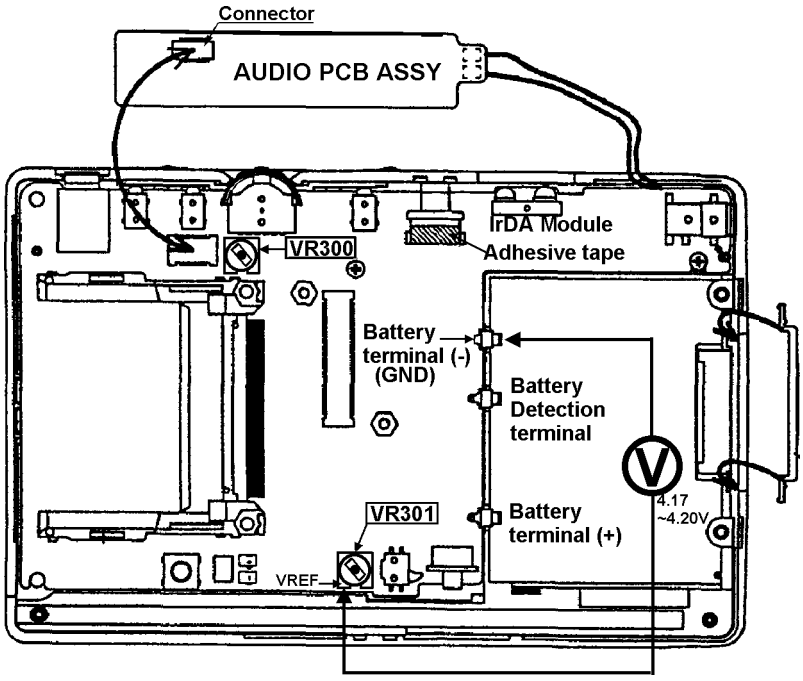
1. Install Diagnostic program to unit referring to **7. OPERATION CHECK** of this manual before this adjustment.
2. Display "**ALL gray**" screen shown to the final page in **7. OPERATION CHECK**.
3. Remove AUDIO PCB ASSY (item 38 of **15-1. EXPLODED VIEW**).
4. Rotating VR300 using ceramic screw driver (minus/ 1.8 mm width), adjust this display to become no flicker. Flickers will appear due to wrong adjustment.

6-2. Adjustment for Vref Terminal Voltage of IC (IC303) for Rechargeable Battery Control (VR301)

Refer to the illustration described below.

■ **PROCEDURE**

1. Add 4.0 ± 0.1V to the rechargeable battery terminal (+).
2. Rotating VR301 using ceramic screw driver (minus/ 1.8 mm width), adjust **VREF** terminal voltage to become 4.17~4.20 V.
   Green LED on the unit will flicker due to wrong adjustment.



7. OPERATION CHECK

7-1. Preparation

1. E-100/ -105
2. Compact Flash memory card
3. Rechargeable battery pack
4. AC adapter (AD-C50200)
5. Cradle
6. PC installed Windows CE Services 2.2
7. Diagnostic program (Diag. exe)

Notes:
- **Be sure to make back-up copies of all important data in E-100/-105 because this check make these data deleted.**
- **Diagnostic program (Diag. exe) exist in SOFT holder of CD-ROM for Service information Disk.**
- **After all checks are finished, perform Full Reset.**
  If not performed, this program remains to exist in RAM of E-100/ -105.
- **The program file names (Diag.exe/ CASIO_JX500diag.exe) are the same names as ones of E-10/-15. Take care not to confuse.**
- **To enter operation check, perform the following procedures after Initial Setup.**

7-2. How to install the diagnostic program to E-100/-105

There are two ways to install the diagnostic program to E-100/-105.

7-2-1. The way of using Compact Flash memory card

Using Compact Flash memory card saved this program, you can perform the operation check without PC.
At first, It is necessary to save the diagnostic program to Compact Flash memory card.

1. Set a Compact Flash memory card to E-100/-105.
2. Connect a cradle and PC installed Windows CE Services 2.2.
3. Set this E-100/-105 to this cradle.
4. E-100/-105 will be automatically turned on, and then the communication with PC will start.
5. After this communication, Mobile Devices window will be automatically opened.
6. Five folder will be made in Guest of Mobile Devices window also.
7. Click the **Storage Card** folder in Guest.
8. Make a new folder in this folder. Make its folder name **jx520diag** precisely.
9. Make a new folder in this jx530diag folder. Make its folder name **casioconfidential** precisely.
10. Enter the **Diag.exe** program file described above in this **casioconfidential** folder.

    (Directory: **Storage Card**> **jx530diag**> **casioconfidential**> **Diag.exe**)
11. Finish to communicate with PC.

- Once the diagnostic program is saved to Compact Flash memory card and E-100/-105, you can perform this operation check without Compact Flash memory card because this program is saved to D-RAM memory in E-100/-105.
  Even if you delete this program saved to RAM memory by Full RESET and so on, you can perform this operation check after inserting this Compact Flash memory card again.
- If you want to delete quite diagnostic program file (Diag.exe file) in Compact Flash memory card, delete **Diag.exe** file at the time of the communication described above.

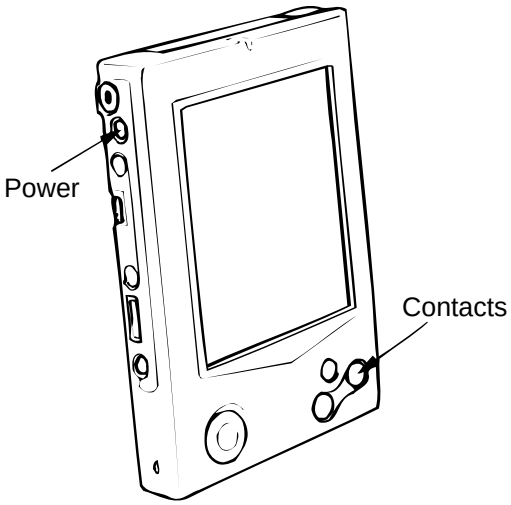
7-2-2. The way of using no Compact Flash memory

1. Make the copy of the **Diag.exe** file using another medium for memory (floppy disk, HD etc.).
2. Change its copied file name (Diag.exe) for **CASIO_JX500diag.exe** precisely.
3. Start to communicate between PC and E-100/-105 using the cradle.
4. Open the **Windows** folder in Guest of the Windows CE Services 2.2.
5. If any message appears, reply to its message.
6. Entering its **CASIO_JX500diag.exe** file in this **Windows** folder, the following screen will appear.

7. After this procedure, pull out E-100/-105 from the cradle.
8. It is recommended that you press **RESET** button on the back of E-100/-105 after item 6.
9. The operation check can be started after performing the procedure described to the next page.

7-3. Operation Check

1. Perform **3-2. Initial Setup** of this manual.
2. Install the diagnostic program to E-100/-105.
3. Tap **Start, Settings**, and **Taskbar**.
4. Select **Auto hide**, and then tap **OK**.
5. Press **Contacts** button while holding down **Power** button. Refer to the right figure.



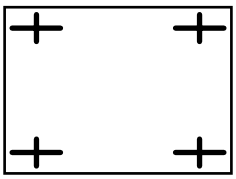
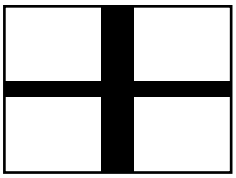
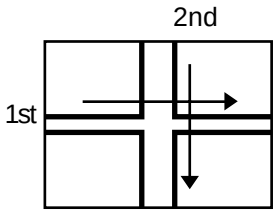
6. After performing this operation, the following **Main Menu** appears in the LCD display.

```
** Main Menu **

1  DISPLAY
2  TOUCH PANEL
3  MEMORY
4  SERIAL
5  POWER CONTROL
6  AUDIO
7  Others
8  COLOR BAR
9  CAMERA


CPROG Rev. xxx  for Jx-537
```

In case of using Compact Flash memory card:
After this display appears, you may pull out its Compact Flash memory card.
Even if there are no Compact Flash memory card, this OPERATION CHECK can be performed because the diagnostic program was already saved to D-RAM of E-100/-105.

ITEM	OPERATION	DISPLAY	NOTE
Display	Tap **1 DISPLAY**.	Medium RED	

ITEM	OPERATION	DISPLAY	NOTE
Display	Tap the panel.		
	Tap the panel.		
	Tap the panel.		No display
	Tap the panel.		All dots
Touch panel	Tap the panel twice.	**Main Menu** display	
	Tap **2 TOUCH PANEL**.	** Touch Panel ** 1 Case 2 Points 3 Cross	

ITEM	OPERATION	DISPLAY	NOTE
Touch panel	Tap **1Case**.	Case ---> OK	
	Press **Action** button.	** Touch Panel ** 1 Case 2 Points 3 Cross	
	Tap **2 Points**.		
	Tap four crosses in any order.	Touch Panel -----> OK	NG if any crosses remain on the display after tapping all four crosses.
	Press **Action** button	** Touch Panel ** 1 Case 2 Points 3 Cross	
	Tap **3 Cross.**		
	Trace on the center of the two black lines in the direction shown to the right arrows.		OK if two lines are reversed as shown to the left. Trace lines while pressing with stylus strongly.

ITEM	OPERATION	DISPLAY	NOTE
MEMORY	Press **Action** button twice.	**Main Menu** display	
	Tap **3 MEMORY**.	** Memory ** 1 ROM CHECK SUM(32MByte) 1 'ROM CHECK SUM(16MByte) 2 ROM BUS CHECK(32MByte) 2 'ROM BUS CHECK(16KByTE) 3 ROM TYPE 4 RAM TEST 5 RAM LOOP 6 RAM R/W TEST	**Main Menu** for **3 MEMORY**
	Tap **1 ROM CHECK SUM (32Kbyte).**	** ROM CHECK SUM ** base addr. Sum value SUM 1 (beXXXXX) = XXXX SUM 2 (beXXXXX) = XXXX	
	Press **Action** button, and then tap **2 ROM BUS CHECK (32Kbyte).**	** ROM BUS CHECK SUM ** SUM 1 (HIGH) = XXXX SUM 1 (LOW) = XXXX SUM 2 (HIGH) = XXXX SUM 2 (LOW) = XXXX	
	Press **Action** button, and then tap **3 ROM TYPE**.	** ROM TYPE ** Mask ROM	
	Press **Action** button, and then tap **4 RAM TEST**.	** RAM CHECK ** RAM SIZE=XX Mbyte Start addr=XXXXXX Chk byte =XXXXXX -- RAM CHK OK --	RAM SIZE: E-100: 16MByte E-105: 32MByte
	Press **Action** button, and then tap **6 RAM R/W TEST**. And then, press **Action** button.	** RAM CHECK ** -- RAM DATA WRITE – -- RAM DATA READ – -- RAM CHK OK --	

ITEM	OPERATION	DISPLAY	NOTE
POWER CONTROL	Press **Action** button twice.	**Main Menu** display	
	Tap **5 POWER CONTROL**.	Currently CPU clock is 131MHz Push Action key to exit	Refer to **Current consumption** of **1. SPECIFICATION** of this manual.
AUDIO	Press **Action** button.	**Main Menu** display	
	Tap **6 AUDIO**.	** Audio ** 1 0.5kHz 2 1kHz 3 2kHz 4 Record	To regain this menu, press **Action** button.
	Tap **1 0.5kHz**.	AUDIO 0.5kHz	Sound of AC 0.5kHz is emitted.
	After tap **Action** button, tap **2 1kHz.**	AUDIO 1kHz	Sound of AC 1kHz is emitted.
	After tap **Action** button, tap **3 2kHz.**	AUDIO 2kHz	Sound of AC 2kHz is emitted.
	Connect a earphone to E-100/-105. After tap **Action** button, tap **4 LR-Channel**.	AUDIO LR-Channel	Hear the repeating stereo human voice “Left channel/ Right channel .....” using a earphone.
	Remove a earphone		

ITEM	OPERATION	DISPLAY	NOTE
Others	Press **Action** button twice.	**Main Menu** display	
	Tap **7 Others**.	** Others ** 1 Switch 2 Compact Flash(CDs, CDOR) ..... 6 BackLight	**Main Menu of Others**
	Tap **1 Switch.**	VDET1R VDET2R VDET3 VDETS VDETCF AC Adapter Cover Charge	Confirm that red LED is flickering.
	Remove Backup battery (CR2032).	..... VDETS ON	Confirm that red LED is flickering.
	After installing Backup battery again, connect AC Adapter to E-100/-105.	..... AC Adapter USED	Confirm that red LED is flickering.
	Remove AC Adapter.		
	Slide the battery cover lock switch to **MAIN** position.	..... Cover OPEN	Confirm that red LED is flickering.
	Slide the battery cover lock switch to **LOCK** position again. And then, press **Action** button.	** Others ** 1 Switch 2 Compact Flash(CDs, CDOR) ..... 6 BackLight	**Main Menu of Others**
	Tap **3 Keyboard RANDAM**.	** Keyboard Random **	
	Press **Calendar**, **Launcher, Contacts** ..... buttons sequentially.	** Keyboard Random ** Calendar Launcher Contacts	

ITEM	OPERATION	DISPLAY	NOTE
Others	Finally, press **EXIT** button.	** Others ** 1 Switch 2 Compact Flash(CDs, CDOR) ..... 6 BackLight	**Main Menu of Others**
	Tap **5 Disk Loop**.		
	Press **Action** button	** Others ** 1 Switch 2 Compact Flash(CDs, CDOR) ..... 6 BackLight	**Main Menu of Others**
	Tap **6 BackLight**.	183	
	Press UP/ DOWN keys of **Cursor button.**	Display becomes lighter/ dimmer. And the number displayed below changes.	
COLOR BAR	Press **Action** button twice.	**Main Menu** display	
	Tap **8 COLOR BAR.**	** COLOR BAR ** 1 Contrast 2 Scroll 3 GRAY	**Main Menu of COLOR BAR**
	Tap **1 Contrast**.	RED GREEN BLUE BLACK WHITE Blight=134	
	Press **Action** button	** COLOR BAR ** 1 Contrast 2 Scroll 3 GRAY	**Main Menu of COLOR BAR**

ITEM	OPERATION	DISPLAY	NOTE
COLOR BAR	Tap **2 Scroll**.	Scroll display of Color bar	
	Press **Action** button	** COLOR BAR ** 1 Contrast 2 Scroll 3 GRAY	**Main Menu of COLOR BAR**
	Tap **3 GRAY**.	All gray display	Refer to **6. ADJUSTMENT**.

■ IrDA CHECK

1. Prepare two units.
2. Install Diagnostic program to both units.
3. Display **Main Menu** of Diagnostic program with both units.
4. Tap **4. SERIAL** with both units.
5. Set both units to the position described to **1. SPECIFICATION** of this manual (≤32cm/ ≤15˚).

Unit for check		Master Unit		Note
Operation	**Display**	**Operation**	**Display**	
Tap **3 Interactive**. **<IrDA Ck>**	Ready	Tap **3 Interactive**. **<IrDA Ck>**	Ready	Standby for IrDA communication
Tap the screen.	Ready OK Ready	no operation	Ready Ready	Confirm OK and Ready display.
Press **Action** button twice.	**Main Menu** display	Press **Action** button twice.	**Main Menu** display	

6. Exchanging **Unit for check** for **Master Unit**, perform this check further.

****

Finally, perform **Full RESET** because this Diagnostic program in RAM should be deleted.

7-4. New (Second) Version Diagnostic Program Rev. 0.50

Main menu display of the old (first) version Diagnostic Program for this check was as follows;

```
** Main Menu **

1 DISPLAY
2 TOUCH PANEL
3 MEMORY
4 SERIAL
5 POWER CONTROL
6 AUDIO
7 Others
8 COLOR BAR
9 CAMERA

CPROG Rev. 0.40 for JX-537
```

New (Second) Version Diagnostic Program will be supplied together with this second edition (version 1) Service Manual.
"**CPROG Rev. 0.40 for JX-537**" in above old display will be changed for
"**CPROG Rev. 0.50 for JX-537**" concerning new (second) version diagnostic program as shown below.
RAM special R/W TEST is added to this new program as shown to the next page.
It is impossible to check all memory areas in RAM (D-RAM) using this TEST.
If any symptoms which seem to caused due to abnormal RAM function (e.g. data error message display, frequent lock, and so on) appear, check the unit using this TEST.
Be sure to save the data to PC or Compact Flash Memory Card before this check because **FULL RESET** must be performed to stop this check.
Performing this RAM TEST, it is impossible to resume checks described in the previous item (**7-3. Operation Check**).

■ Procedure

1. After installing this new program to the unit, display the following Main Menu.

```
** Main Menu **

1 DISPLAY
2 TOUCH PANEL
3 MEMORY
4 SERIAL
5 POWER CONTROL
6 AUDIO
7 Others
8 COLOR BAR
9 CAMERA

CPROG Rev. 0.50 for JX-537
```

2. Tapping 3 MEMORY, the following display appears.

```
    ** Memory **

1 ROM CHECK SUM(32MByte)
1 'ROM CHECK SUM(16MByte)
  .....
  .....
  .....
7 RAM special R/W TEST(32MByte)
7'RAM special R/W TEST(16MByte)
```

3. Tap **7 RAM special R/W TEST(32MByte)** in case of E-105.
   On the other hand, tap **7'RAM special R/W TEST(16MByte)** in case of E-100.
4. LED emitted red light flickers at interval of about one second.
5. In case of tapping **7 RAM special R/W TEST(32MByte)**, LED stop to flicker after about 70 seconds and continues to emit red light.
   In case of tapping **7'RAM special R/W TEST(16MByte)**, LED stop to flicker after about 35 seconds and continues to emit red light.
6. If NG, LED continues not to emit red light but to flicker at intervals of about 2 seconds.
7. Finally, perform **FULL RESET** to stop this check as mentioned in the previous page.

8. TROUBLE SHOOTING

Before assuming malfunction and contacting your expert when experiencing operational problems, be sure to check the following information as well as the troubleshooting section of the *Palm-size PC User's Guide* first.

Nothing happens when the [Power] button is pressed.	
Possible Cause	**Recommended Action**
Main battery is weak.	Charge the battery pack.
Internal malfunction	Reset the unit. If resetting the unit does not correct the problem, perform a full reset (memory initialize).*

Operation is disabled when the AC adapter is connected.	
Possible Cause	**Recommended Action**
Main battery is weak.	Charge the battery pack.
The unit is not mounted on the cradle correctly.	Mount the unit on the cradle correctly.

Replacing the main battery caused malfunction.	
Possible Cause	**Recommended Action**
Main battery is not loaded correctly.	Remove and then reload the main battery. • Make sure the positive (+) and negative (–) poles are oriented correctly.
The battery replacement procedure was not followed correctly.	Perform a full reset (memory initialize).* • If the above action does not solve the problem, remove the main battery and contact an expert .

Rechargeable battery pack life is very short after each charge.	
Possible Cause	**Recommended Action**
Battery pack is damaged or has reached the end of its service life.	Install a new battery pack.

The low back-up battery message continues to appear even after replacement of the back-up battery.	
Possible Cause	**Recommended Action**
The back-up battery is upside down.	Remove the back-up battery, turn it over, and reload it.
The back-up battery was loaded before the main battery.	Remove the back-up battery, and reload it.
Power was left on while the battery pack was replaced.	Turn power off and then back on again.

Nothing happens when the touch screen is touched.	
Possible Cause	**Recablobration Action**
The touch screen is out of cablibration.	Recalibrating the touch screen.
Static electricity or some other problem has caused the touch screen to malfunction.	Reset the unit.

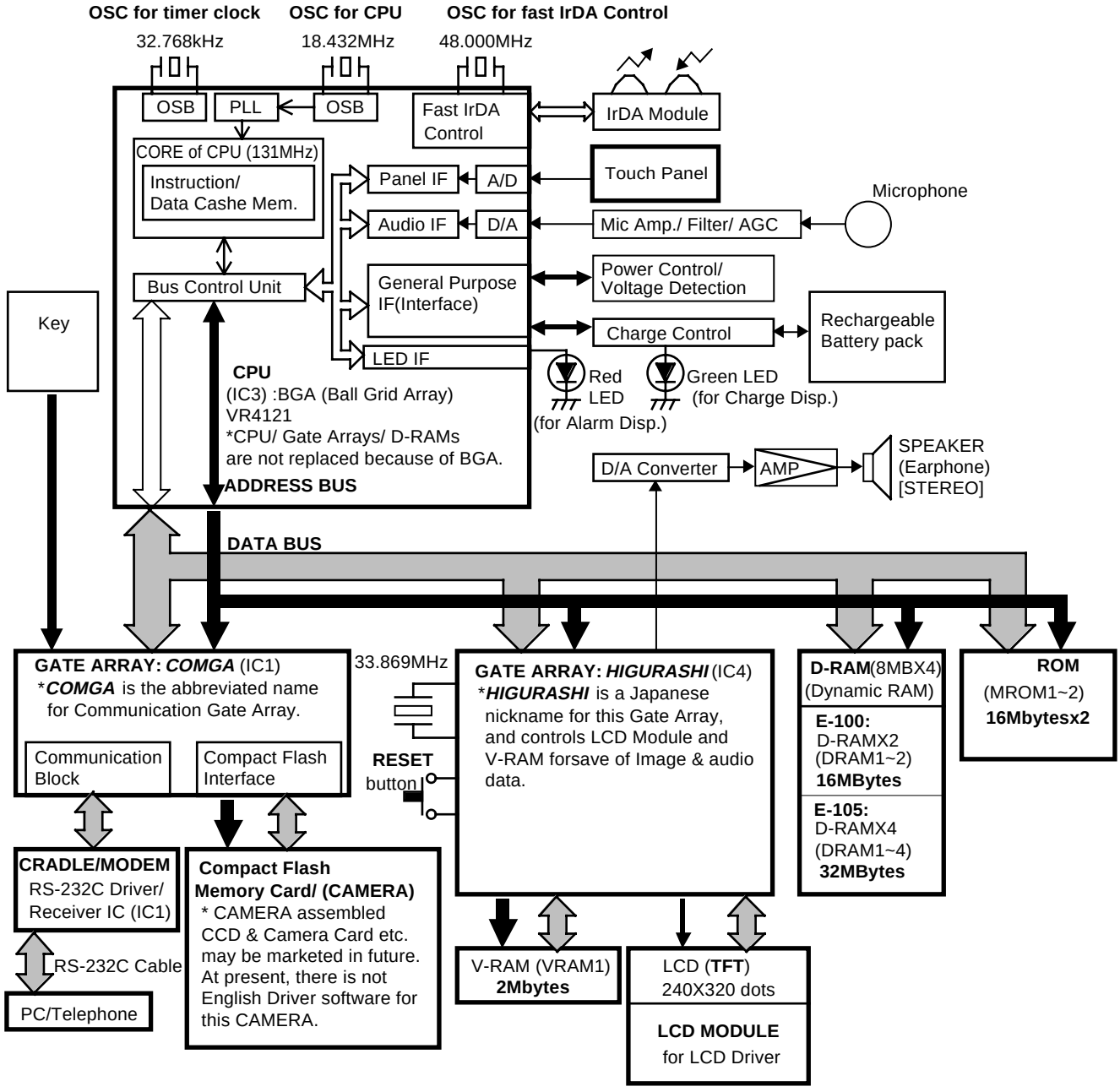
The screen is locked up.	
Possible Cause	**Recommended Action**
Internal malfunction	Reset the unil. If resetting the unit does not correct the problem, perform a full reset (memory initialize).*

A message about a data error is on the screen.	
Possible Cause	**Recommended Action**
Internal malfunction	Follow the instructions that appear on the screen.

* Perform the procedure on page 8 when the full reset (memory initialize) does not correct the problem. Lock occurred due to damage of RAM/ROM can not be resolved by FULL RESET.

9. CIRCUIT EXPLANATION

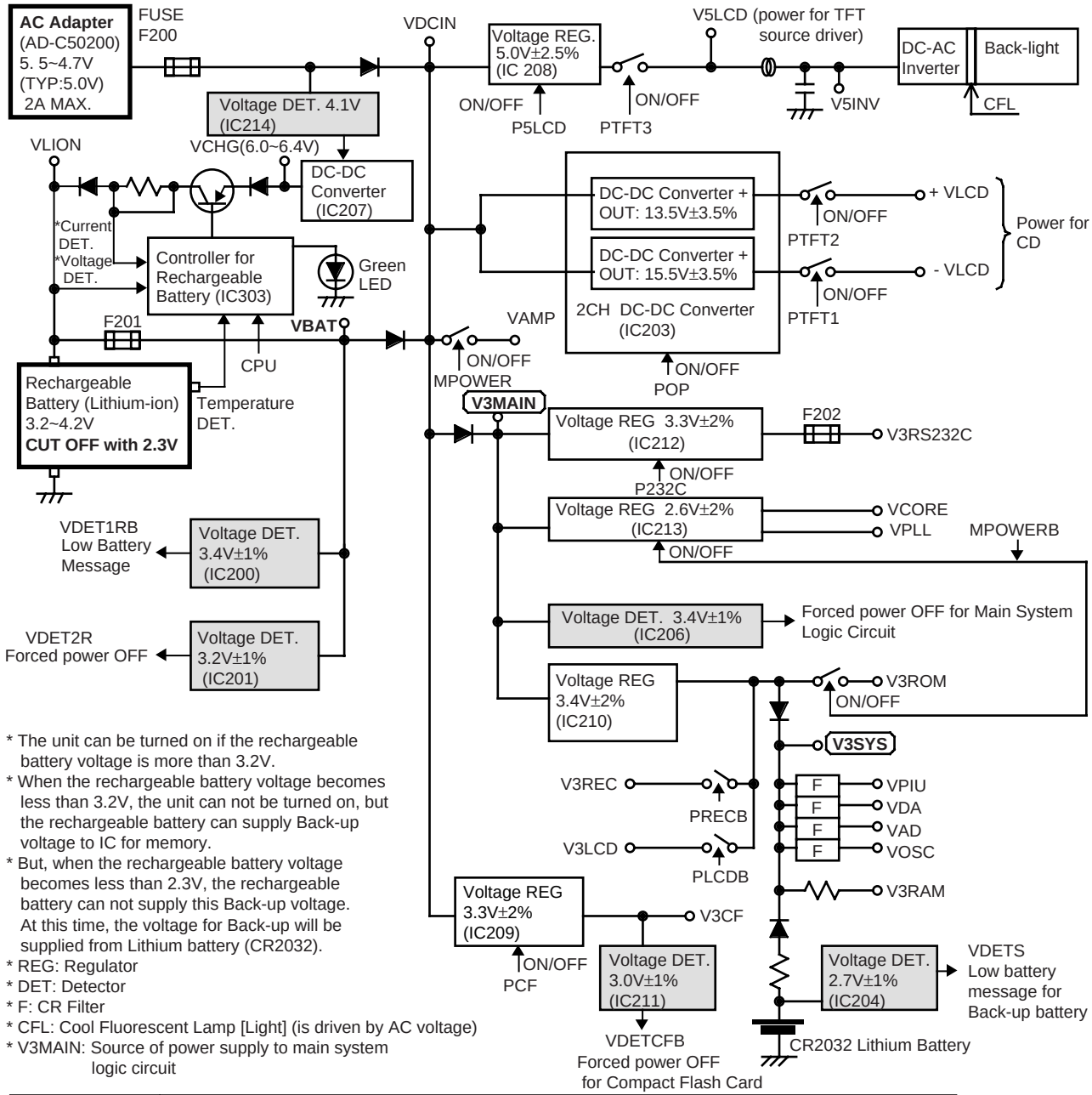
9-1. BLock Diagram



* Refer to **11. SHEMATIC DIAGRAMS** in this Manual.
* Refer to **9-2. Power Supply** and on the next page concerning Power supply, Driver circuit for back-light and so on.
* IF is the abbreviated word for Interface.
* V-RAM (VRAM): Video Random Access Memory.
* TFT: Thin Film Transistor color liquid crystal display

9-2. Power Supply

■ Block Diagram of Power Supply and Voltage Detector



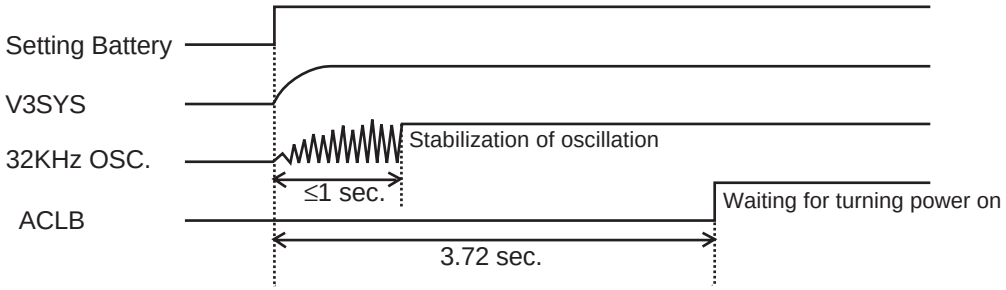
* The unit can be turned on if the rechargeable battery voltage is more than 3.2V.
* When the rechargeable battery voltage becomes less than 3.2V, the unit can not be turned on, but the rechargeable battery can supply Back-up voltage to IC for memory.
* But, when the rechargeable battery voltage becomes less than 2.3V, the rechargeable battery can not supply this Back-up voltage. At this time, the voltage for Back-up will be supplied from Lithium battery (CR2032).
* REG: Regulator
* DET: Detector
* F: CR Filter
* CFL: Cool Fluorescent Lamp [Light] (is driven by AC voltage)
* V3MAIN: Source of power supply to main system logic circuit

VBAT	Power supply voltage from Rechargeable Battery
VAMP	Power supply voltage to Audio Amp.
V5LCD	Power supply voltage to TFT source driver
+VLCD/ -VLCD	Power supply voltage to drive LCD directly
V3LCD	Power supply voltage to Logic circuits for TFT source driver
V5INV	Power supply voltage to DC/ AC inverter to drive CFL
V3RS232C	Power supply voltage to RS-232C Driver/ Receiver IC
VCORE	Power supply voltage to CORE (cache memory etc.) in CPU
VPLL	Power supply voltage to PLL (Phase Locked Loop) circuit in CPU
V3ROM	Power supply voltage to ROM, DA Converter (PCM1717) to drive Audio Amp , V-RAM & IrDA Module
V3SYS	Power supply voltage to CPU & Gate Arrays mainly
VPIU	Power supply voltage to Touch Panel Interface circuit in CPU
VAD/ VDA	Power supply voltage to AD/ DA Converter in CPU
VOSC	Power supply voltage to the oscillator circuit in CPU
V3RAM	Power supply voltage to D-RAM
V3REC	Power supply voltage to MIC Amp & AGC

9-3. Function

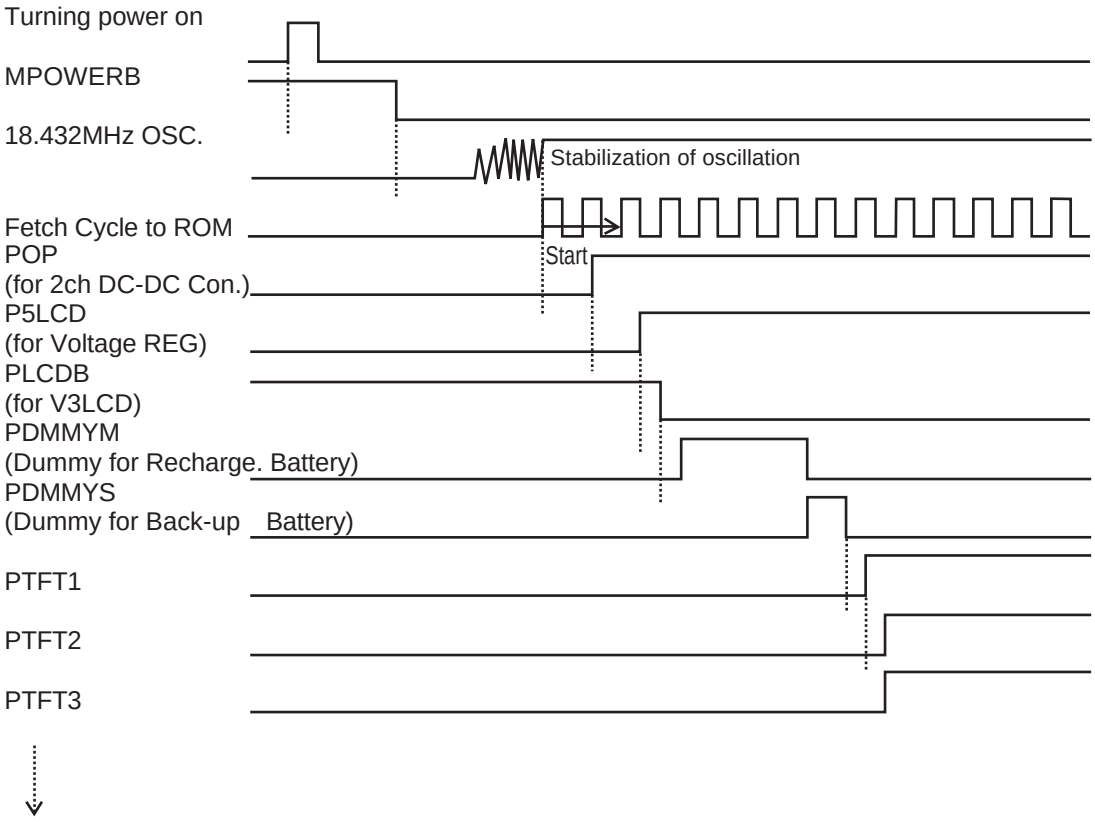
Refer to the **9-1. Block Diagram**, **9-2. Power Supply** and **11. SCHEMATIC DIAGRAMS**.

■ **Boot Sequence at the time of setting Rechargeable Battery**



Of course, if one of these three factors don't start to boot, the unit don't work.

■ **Boot Sequence at the time of turning power on**



RAM CHECK..... etc.

After Fetch Cycle for ROM cord starts, it is possible to drive software of this unit.
But, if RAM CHECK don't finished, the unit don't work.

■ Interior Circuits of CORE of CPU work by high-speed frequency 131.1MHz.

■ IrDA Module HSDL3600 (Quotation from DATA Book by *HP*)
This module is a low-profile infrared transceiver module that provides interface between logic and IR signals for through-air, serial, half-duplex IR data link.
The module is compliant to IrDA Data Physical Layer Specifications 1.1 and IEC825-Class 1 Eye Safe.
Receive signal rate: 2.4 kb/s~4Mb/s (In case of E-100/ -105: Normal/ MIR→115.2kb/s FIR→1.25Mb/s)
Oscillation of 48MHz is for Test with FIR, and stops when transmission with Normal/ MIR is performed.

II/O Pins Configuration Table

Pin	Symbol	Description
1	VCC	Supply Voltage
2	AGND	Analog Ground
3	FIRSEL	FIR (Fast IR) Select
4	MD0	Mode 0
5	MD1	Mode 1
6	NC	No Connection
7	GND	Ground
8	RXD	Receive Data Output
9	TXD	Transmitter Data Output
10	LEDA	LED Anode

Transceiver Control Truth Table

Mode 0	Mode 1	FIRSEL	RX Function	TX Function
1	0	Don't Care	Shutdown	Shutdown
0	0	0	SIR (Slow IR)	Full Distance Power
0	1	0	SIR (Slow IR)	2/3 Distance Power
1	1	0	SIR (Slow IR)	1/3 Distance Power
0	0	1	MIR/FIR	Full Distance Power
0	1	1	MIR/FIR	2/3 Distance Power
1	1	1	MIR/FIR	1/3 Distance Power

0: Low Level Voltage/ 1: High Level Voltage

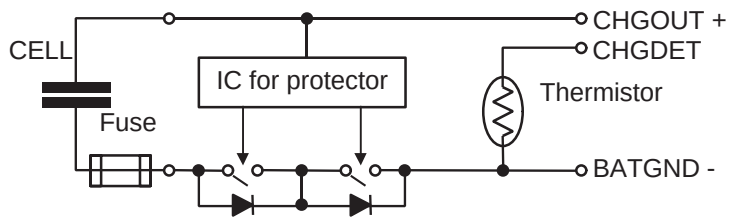
■ **IC M62253FP (IC303) for Rechargeable Battery Controller**

II/O Pins Configuration Table

Pin	Symbol	Description (Function)
1	TIN	Detection of temperature & connection with unit
2	C3	Terminal for setting of delay time of detection by TIN
3	Vref	Reference voltage terminal for interior circuits
4	VDD	5.0V Reference voltage terminal
5	VCC	Power supply voltage (= VCHG)
6, 7	LED1, 2	Terminal for connection with LED
8	C1	Terminal for setting of delay time of detection of voltage
9	C2	Terminal for setting of delay time of detection of current
10	GND	Ground
11	VSENSE	Terminal for voltage detection
12	SENSE-	Detection terminal of charge current (low current)
13	SENSE+	Detection terminal of charge current (high current)
14	OUT	Direct control to charge current from AC Adapter

■ **Rechargeable Battery** (Lithium-Ion Battery)

* Brief Block Diagram

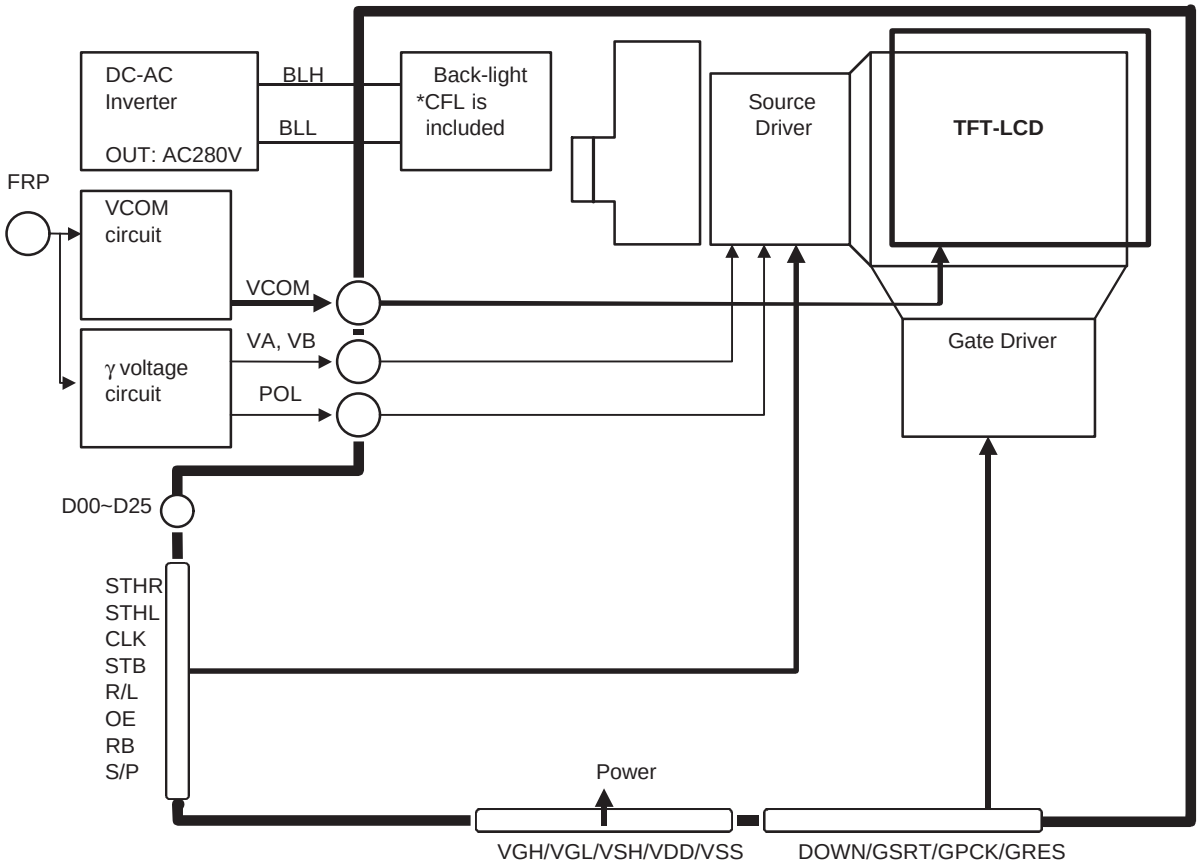


There is a thermistor in Battery to prevent from overheat. Thermal detection range is 5˚~35˚C.
If terminal voltage of CHGOUT+ is 2.3V, the charge/ recharge to CELL will be completed after about 6 hours.
Warrantee charge/ recharge times are 300 times. But charge/ recharge times can be performed more than 300 times actually.
Using Compact Flash Memory Card frequently, this battery life will be shortened.
It is recommended that the unit is driven by AC Adapter when using this card.

■ TFT LCD Module (COM38T3103DPQ)

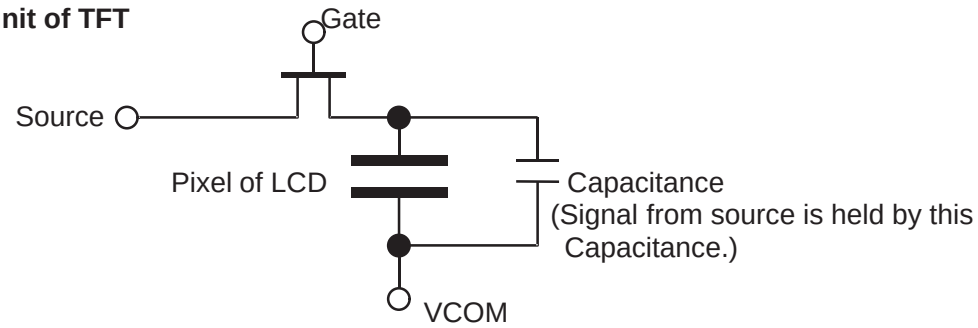
This module mainly consists of TFT-LCD, Back-light and DC-AC inverter for driver of Back-light.
Back-light life time: about 15000 hours (Continuous Lighting/ Room Temperature: 25 ± 5°C)

Brief Block Diagram



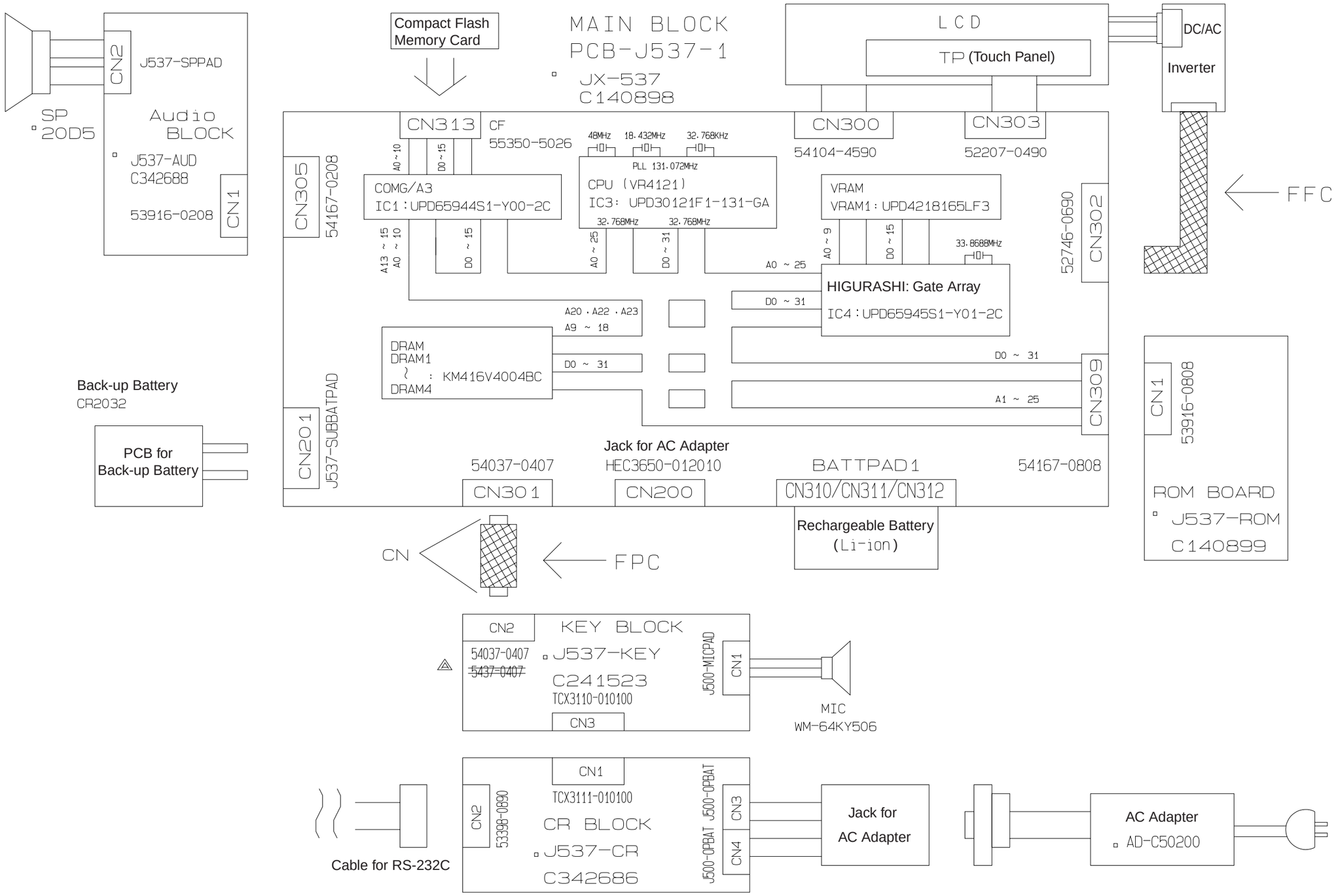
D00~D05: DATA for Blue signal/ D10~D15: DATA for Green signal/ D20~D25: DATA for Red signal
STHR/STHL: Start Pulse CLK: Shift clock STB: Latch for Source Driver R/L: Reverse signal for scanning of Source
OE: Power save control signal (not used) RB: Control signal for Bias current of Source Driver
S/P: Changing of serial/ parallel for DATA DOWN: Reverse signal for scanning of Gate GSRT: Start signal to Gate
GPCK: Shift clock for Gate GRES: Control signal to Gate VCOM: VCOM electrode (refer to the illustration shown below)
VA/ VB: γ power supply voltage (VA=0.57V/ VB=4.43V) (Minimum /Maximum Amplitude Value of AC Voltage to drive LCD)
POL: Reverse signal for polarity of color BLL: Low AC Voltage to drive CFL (White) BLH: High AC Voltage to CFL (Pink)

*** One element unit of TFT**



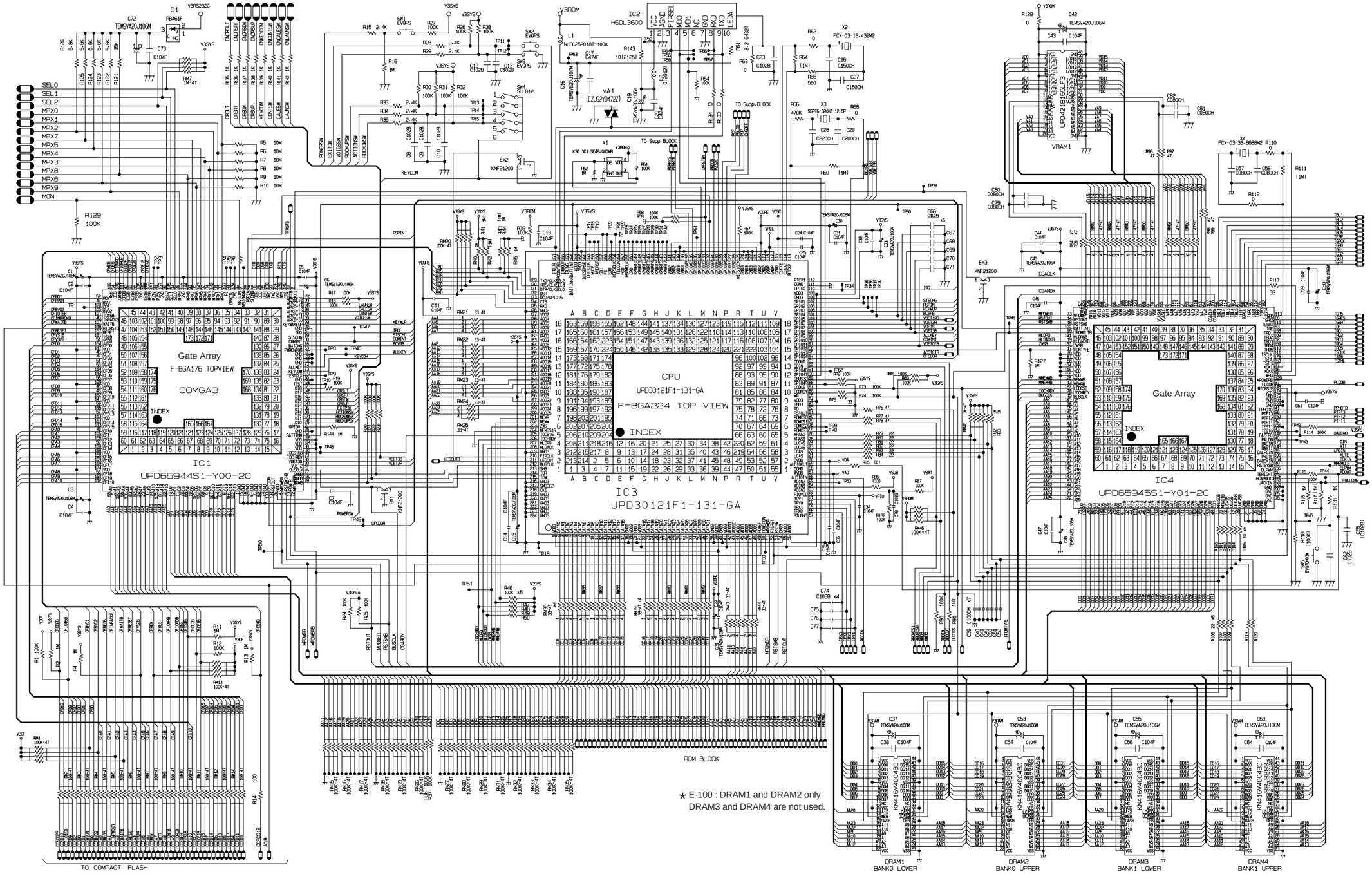
For the other information concerning circuit (Touch panel, RS232C Driver, AGC and so on), refer to Service Manual for A-10/A-11, A-20, E-10 and E-15.

10. WIRING DIAGRAM

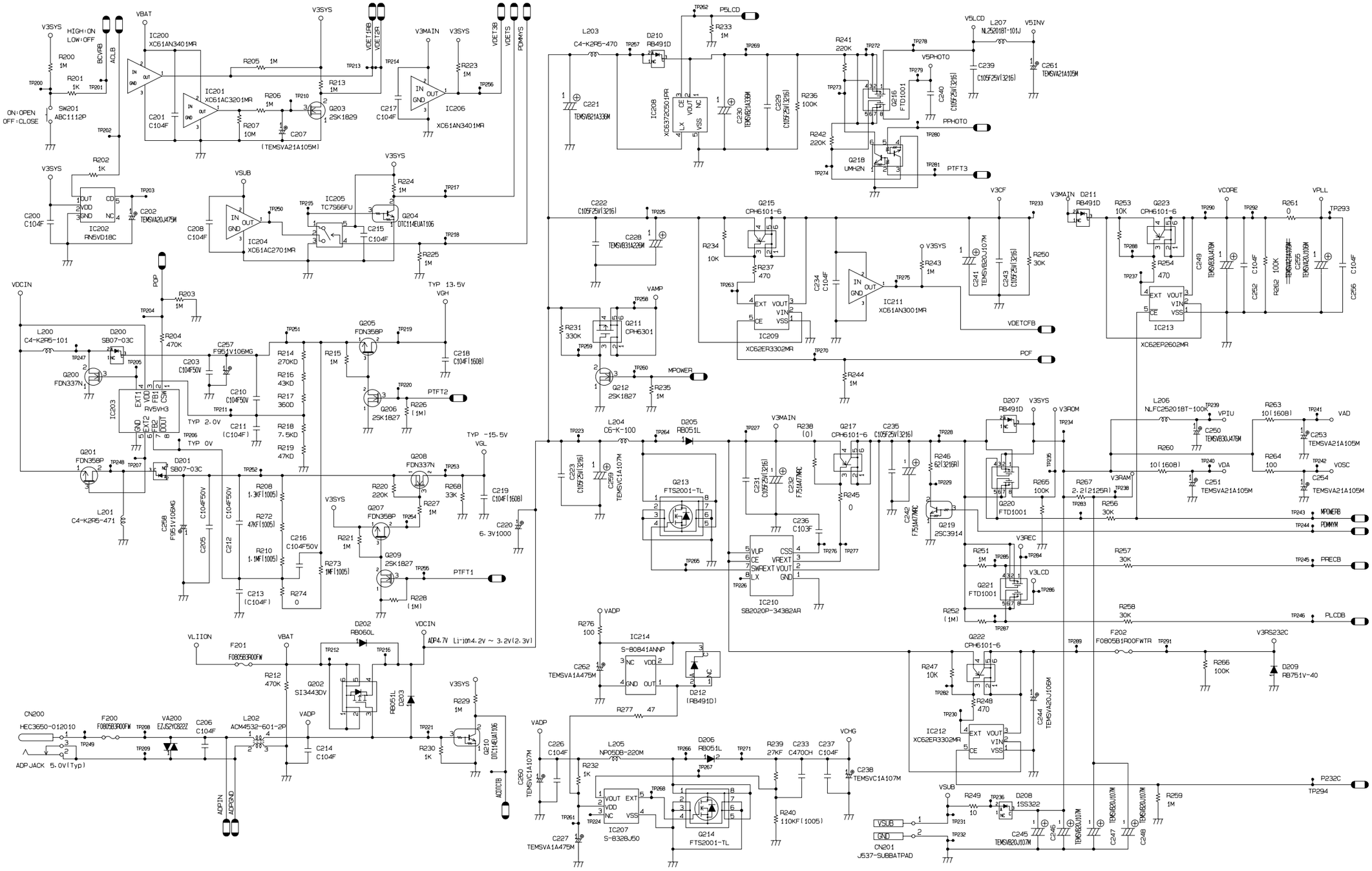


11. SCHEMATIC DIAGRAMS

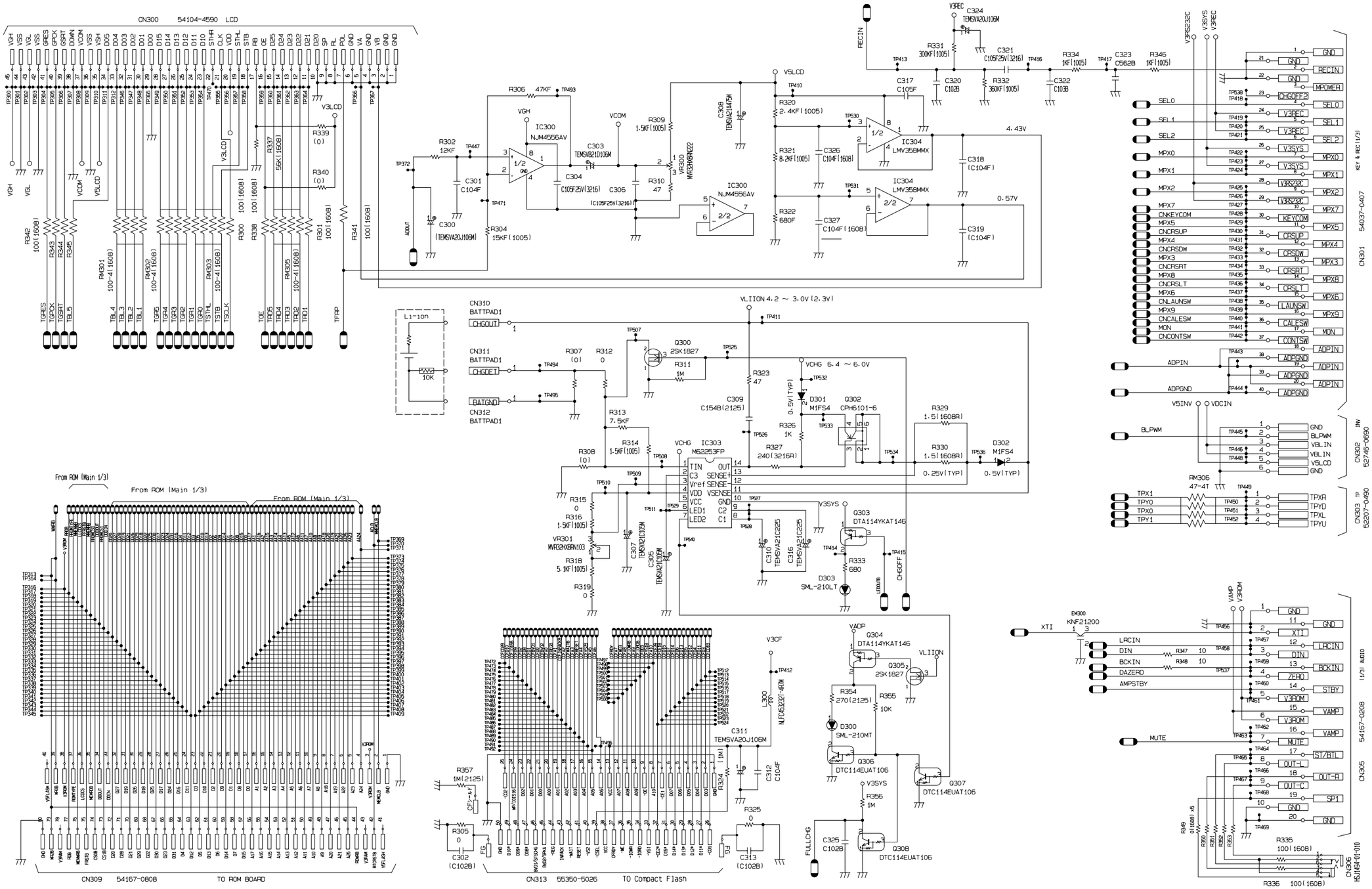
11-1. Main Block (1/3)



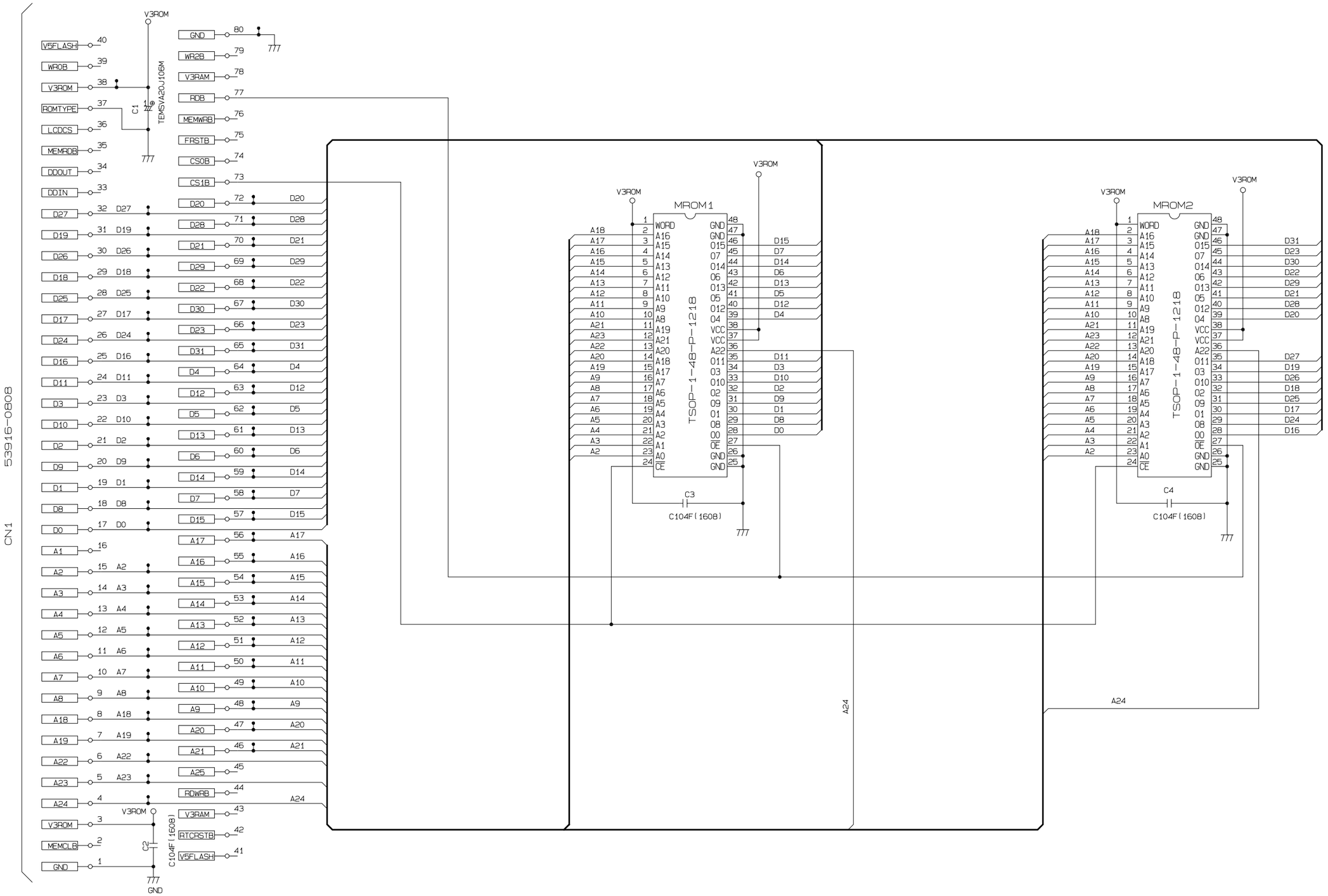
11-1. Main Block (2/3)



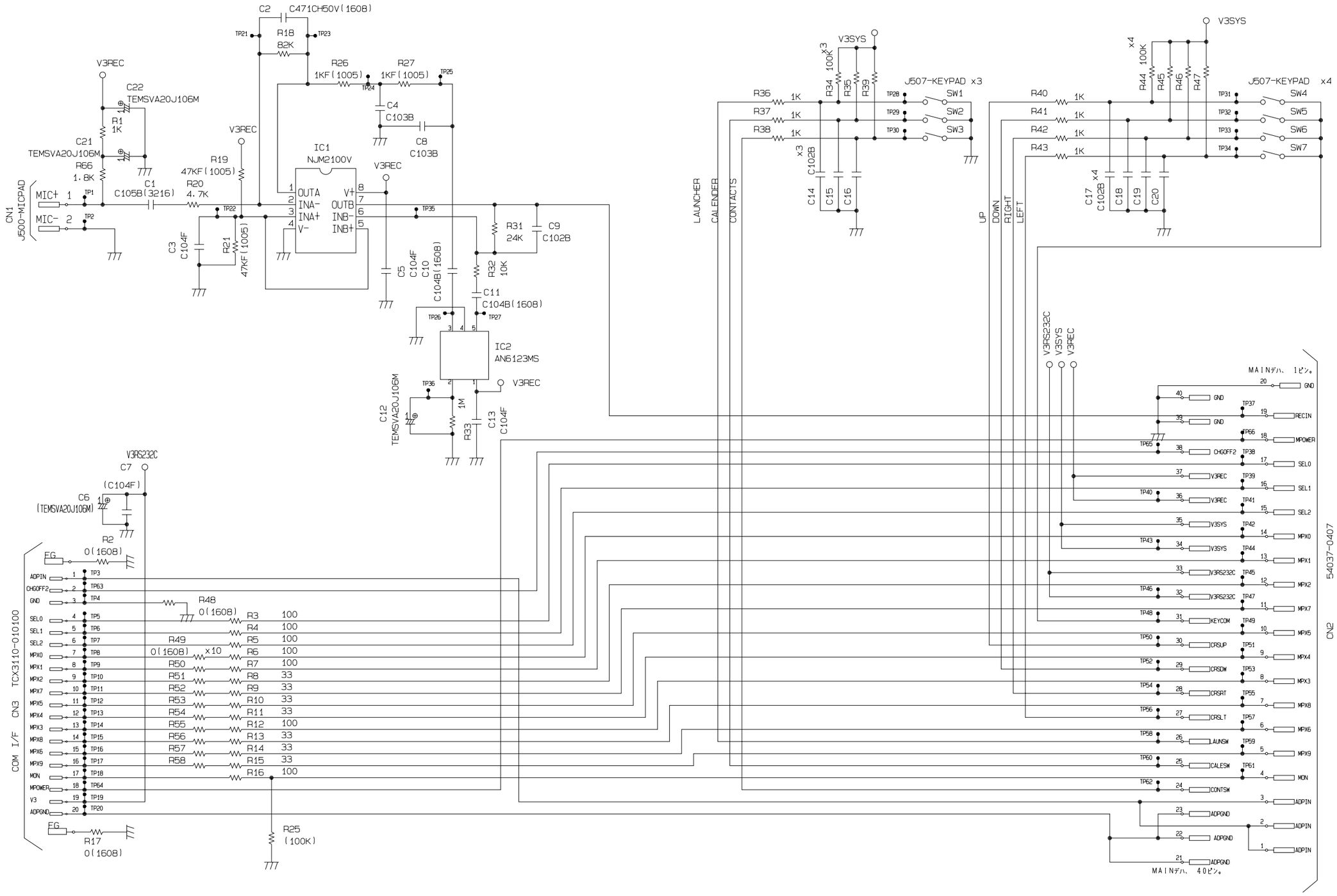
11-1. Main Block (3/3)



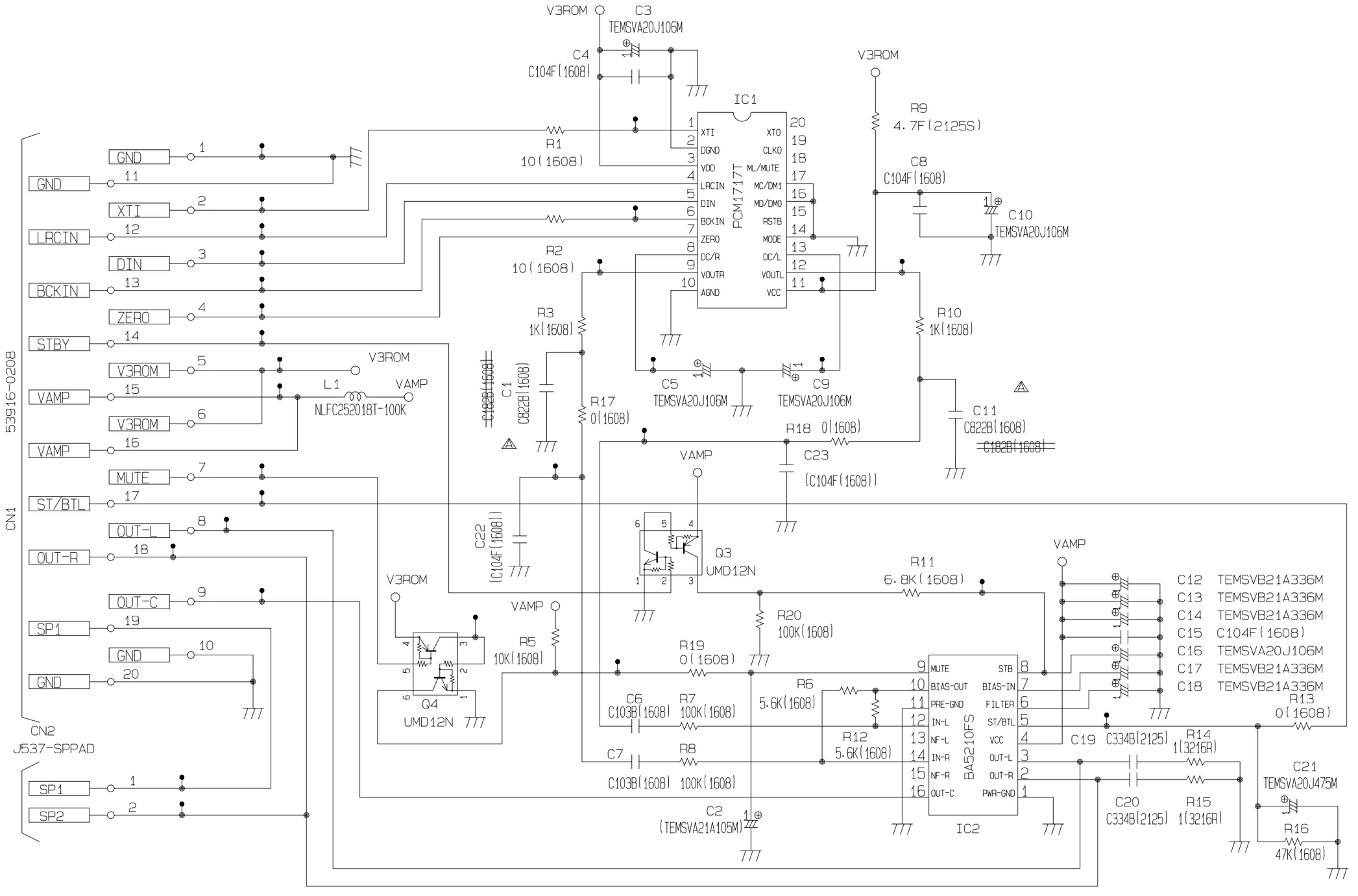
11-2. ROM Board



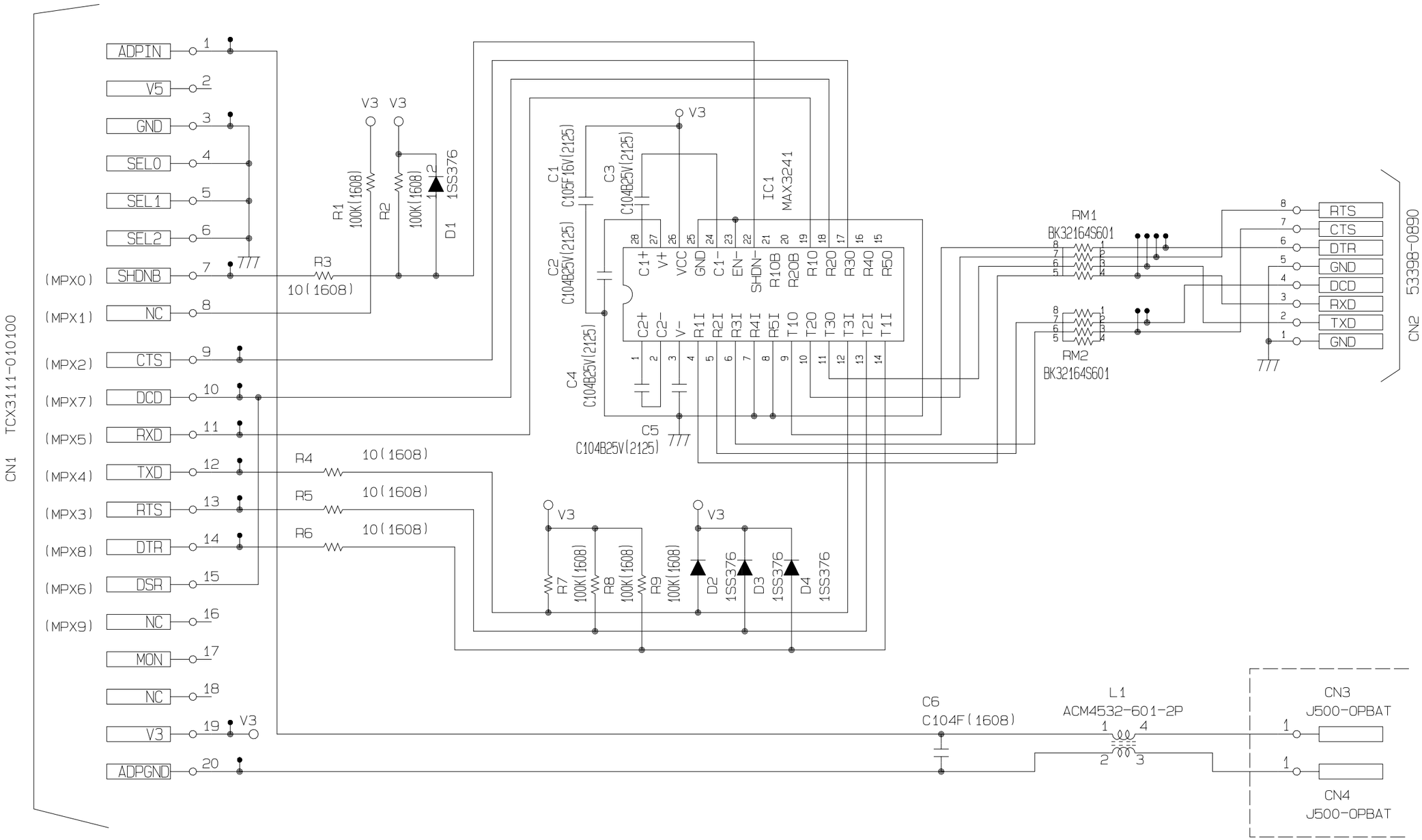
11-3. Key Board



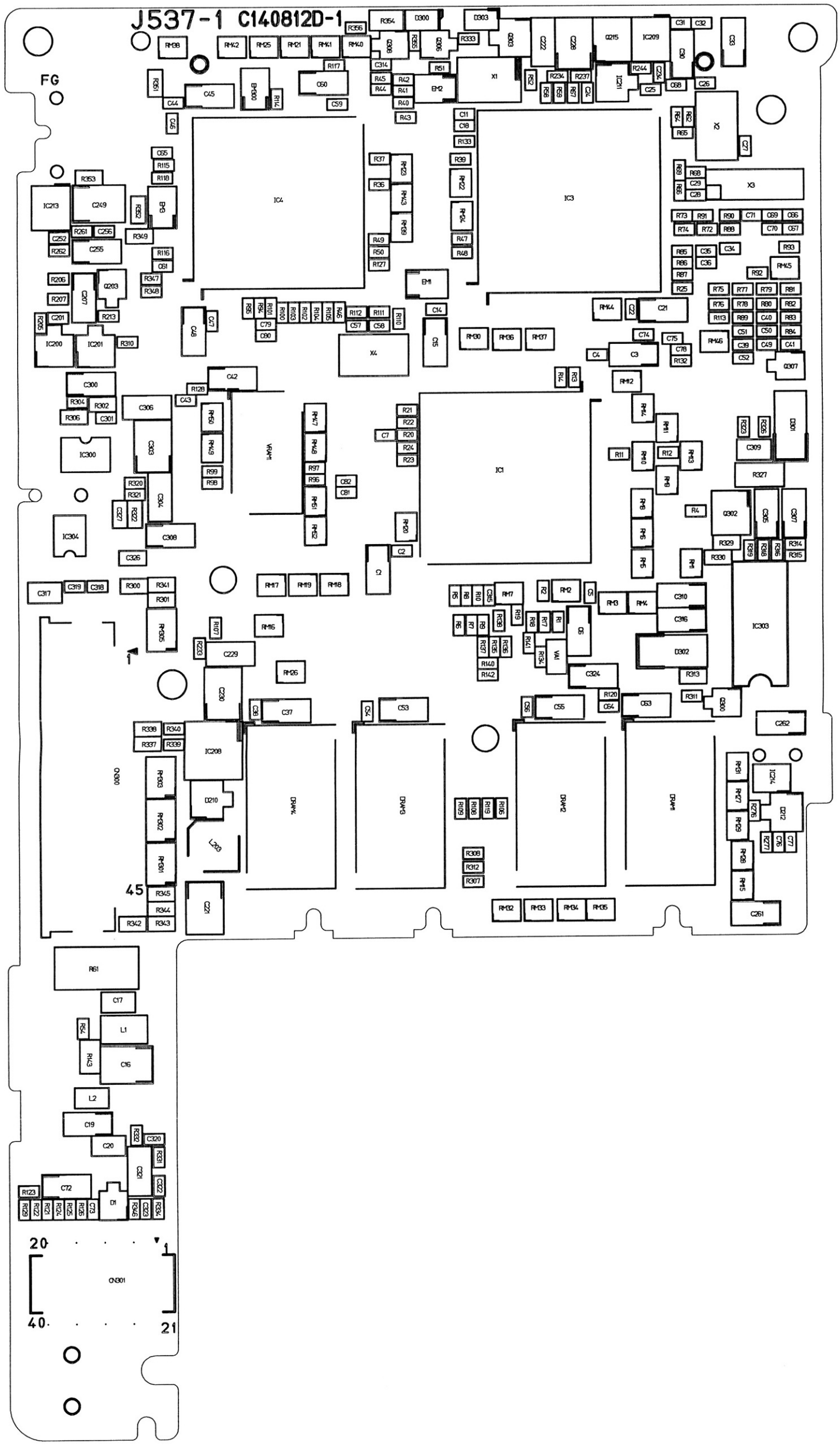
11-4. Audio Block



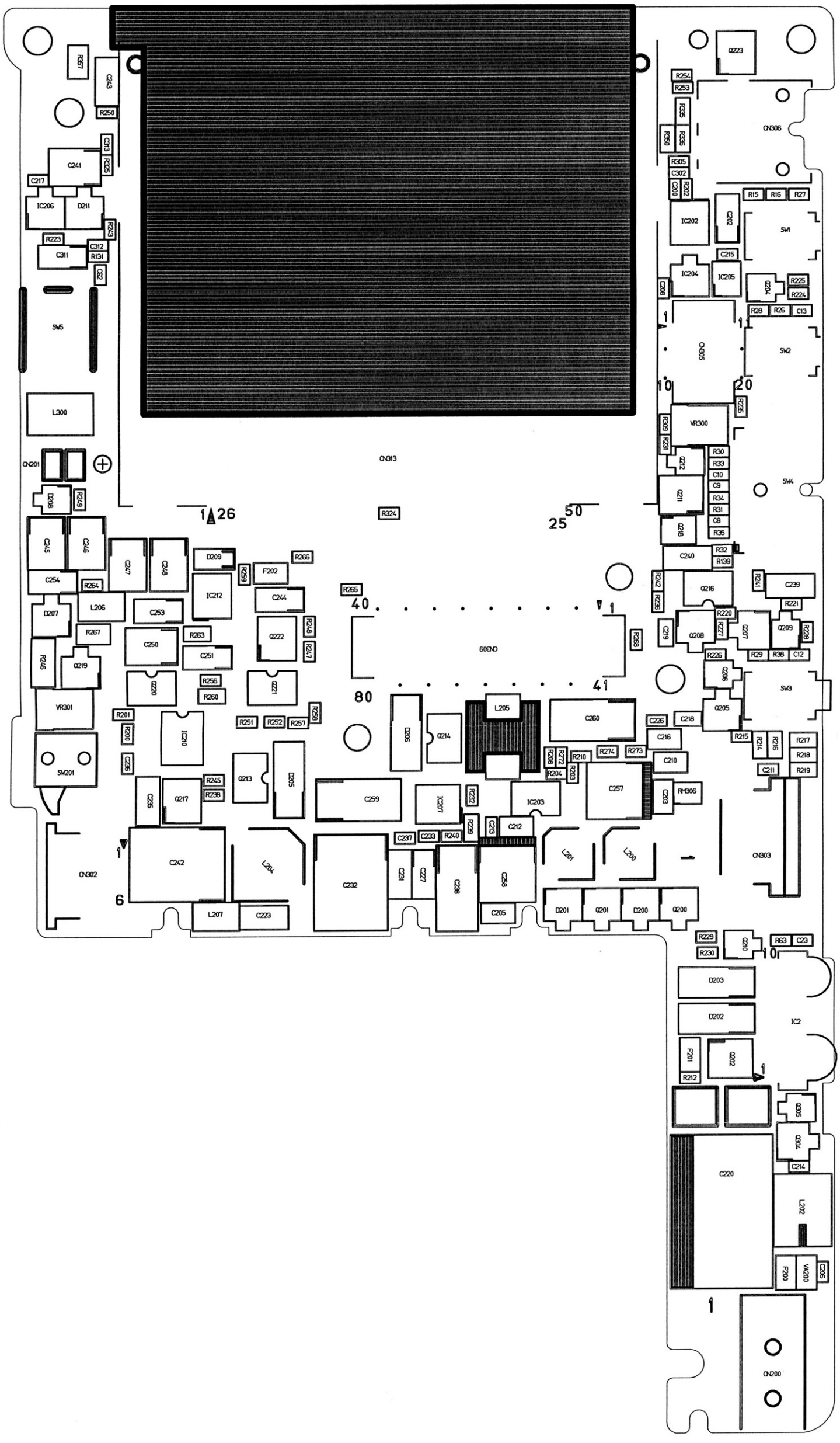
11-5. Cradle


CN1 TCX3111-010100
ADPIN 1
V5 2
GND 3
SEL0 4
SEL1 5
SEL2 6
(MPX0) SHDNB 7
(MPX1) NC 8
(MPX2) CTS 9
(MPX7) DCD 10
(MPX5) RXD 11
(MPX4) TXD 12
(MPX3) RTS 13
(MPX8) DTR 14
(MPX6) DSR 15
(MPX9) NC 16
MON 17
NC 18
V3 19
ADPGND 20
R3 10(1608)
R1 100K(1608)
R2 100K(1608)
D1 1SS376
V3
C1 C105F16V(2125)
C3 C104B25V(2125)
C2 C104B25V(2125)
C4 C104B25V(2125)
C5 C104B25V(2125)
IC1 MAX3241
C1+ V+ VCC GND C1- EN- SHDN- R10B R20B R10 R20 R30 R40 R50
C2+ C2- V- R1I R2I R3I R4I R5I T1O T2O T3O T3I T2I T1I
RM1 BK32164S601
RM2 BK32164S601
RTS CTS DTR GND DCD RXD TXD GND
CN2 53398-0890
R4 10(1608)
R5 10(1608)
R6 10(1608)
R7 100K(1608)
R8 100K(1608)
R9 100K(1608)
D2 1SS376
D3 1SS376
D4 1SS376
C6 C104F(1608)
L1 ACM4532-601-2P
CN3 J500-0PBAT
CN4 J500-0PBAT

12. PCB VIEW (MAIN PCB (1/2))



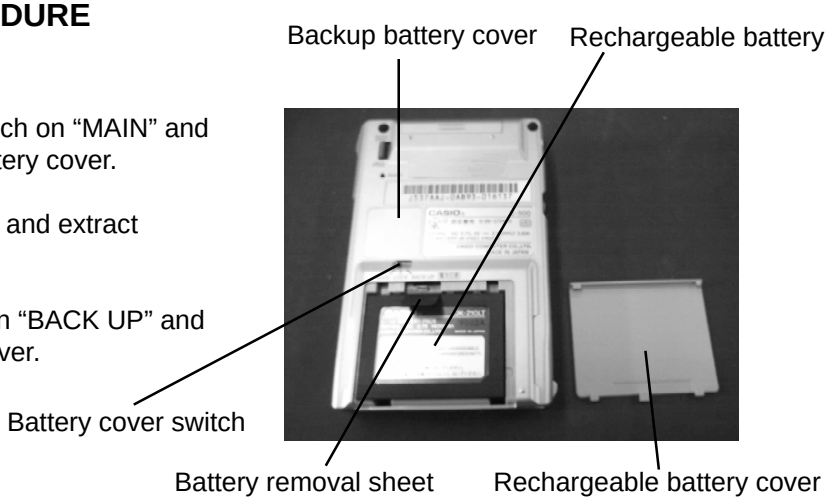
MAIN PCB (2/2)


R357
C243
R250
C313
R225
C241
C217
IC206
D211
R223
R243
C312
C311
R131
C52
SW5
L300
CN201
D208
R249
C245
C246
C247
C248
D209
R266
R259
F202
C254
R264
C244
IC212
L206
C253
D207
R267
R263
C250
C251
R248
R247
Q222
R246
Q219
R256
R260
Q220
Q221
VR301
R201
R200
IC210
R251
R252
R257
R258
SW201
C235
R245
R238
C225
Q217
Q213
D205
C259
IC207
IC203
R232
R239
C213
C212
C237
C233
R240
C242
L204
C232
C231
C227
C228
C258
C205
L207
C223
CN302
CN313
R324
CN309
R265
R268
D206
Q214
L205
C260
R208
R272
R210
R274
R273
R204
R203
C257
C210
C203
RM306
C216
C226
C218
C215
R215
R214
R216
R217
R218
R219
C211
Q223
R254
R253
R335
R336
R350
CN306
R305
C302
C300
R202
R15
R16
R27
IC202
C202
SW1
IC204
IC205
C204
R225
R224
C208
R28
R26
C13
SW2
CN305
VR300
R309
R223
R30
R33
C10
C9
R34
R31
C8
R35
Q211
Q218
C240
R32
R139
R242
R235
Q216
R241
C239
R221
R220
R227
Q219
Q208
Q207
Q209
R228
R29
R38
C12
R226
Q206
SW3
Q205
C218
C226
C216
C210
C211
R217
R218
R219
R214
R216
R215
RM306
C203
C257
C259
C260
L205
D206
Q214
IC207
IC203
R232
R239
C213
C212
C237
C233
R240
C231
C227
C228
C258
C205
L201
L200
CN303
D201
Q201
D200
Q200
R229
R230
Q210
R63
C23
D203
D202
IC2
F201
R212
Q202
Q205
Q204
C214
C220
L202
F200
VA200
C206
CN200

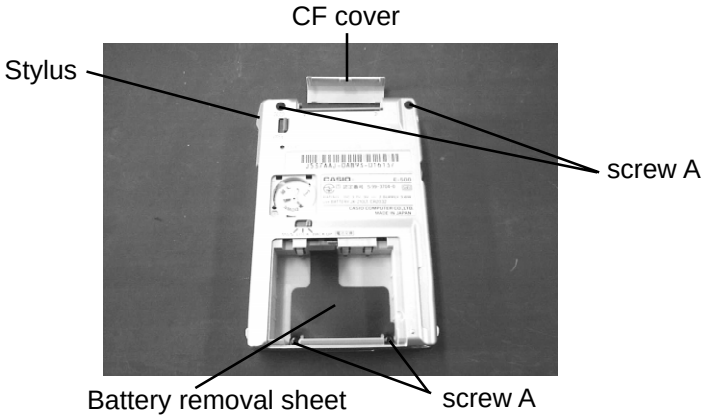
13. DISASSEMBLY PROCEDURE

■ COMPONENTS

1. Position Battery cover switch on “MAIN” and remove Rechargeable battery cover.
2. Pull Battery removal sheet and extract Rechargeable battery.
3. Set Battery cover switch on “BACK UP” and remove Backup battery cover.
4. Remove Backup battery.



5. Remove CF cover.
6. Pull out Stylus.
7. Remove 4 screw A's.
8. Displace Battery removal sheet.

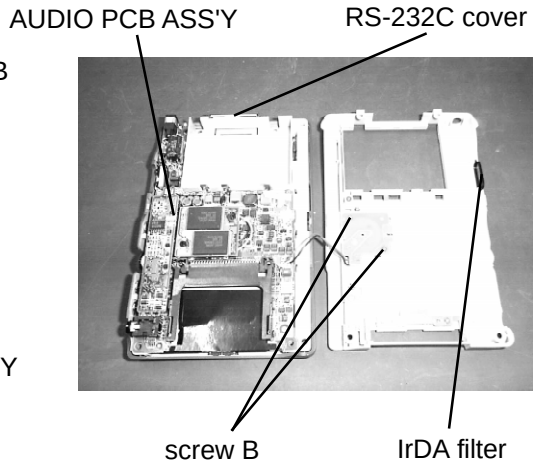


9. Pulling stylus holder part of Upper case outward and disengage the case hooks.

10. Unhook the opposite hooks by sliding Lower case.
11. Remove IrDA filter.
12. Remove RS-232C cover.
13. Remove 2 screw B's on Backup battery PCB located on Lower case. Separate Backup battery PCB and Lower case.
14. Disconnect AUDIO PCB ass'y from the connector and remove the PCB.

Note:
As the AUDIO PCB ass'y is stuck by adhesive tape, be cautious when you peel it off.

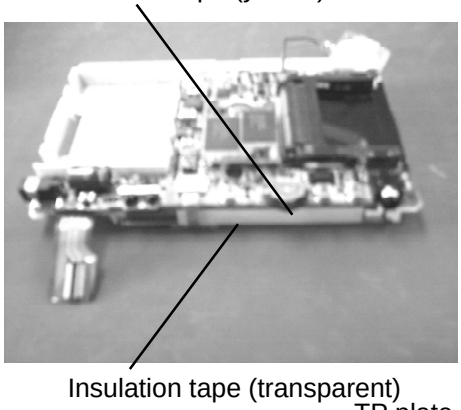
15. Lift Inner case and disconnect FPC from KEY PCB ass'y.



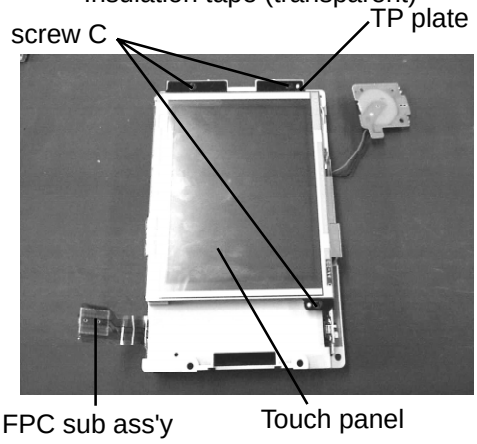
■ INNER CASE ASS'Y

1. Peel off Insulation tape (transparent).

2. Utilizing tweezers, disconnect Touch panel (TP) connector.

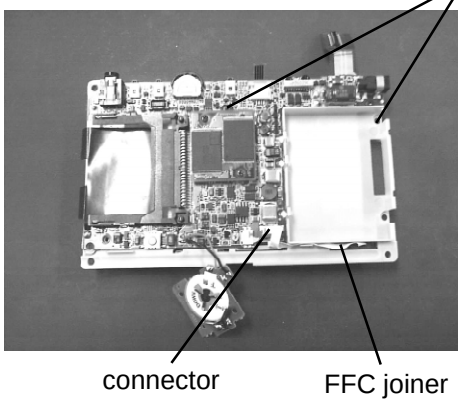


3. Remove 3 screw C's and separate TP plate.



4. Remove 2 screw D's from MAIN PCB ass'y.

5. Disconnect FFC joiner from the connector.

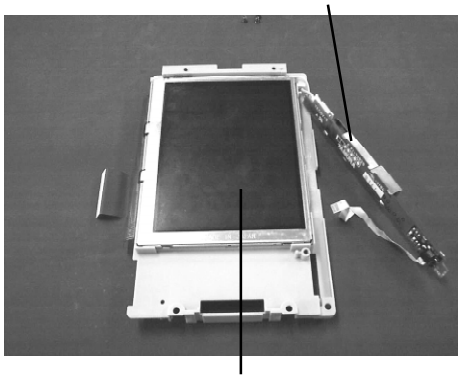


6. Disconnecting the connectors, separate LCD module and MAIN PCB ass'y.

7. Peeling the adhesive tape off, separate Inverter from Inner case.

8. Push LCD module from the back (FPC side) and peel off adhesive tape and Insulation tape then separate the LCD module from Inner case.

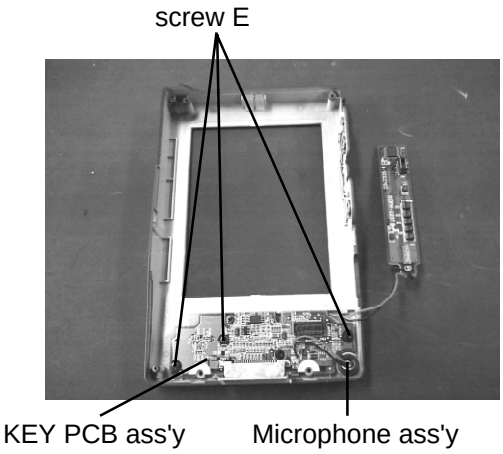
9. Disconnect the connector that puts together LCD module and Inverter.



■ UPPER CASE ASS'Y

1. Extract Microphone ass'y from Upper case.

2. Remove 3 screw E's and separate KEY PCB ass'y.

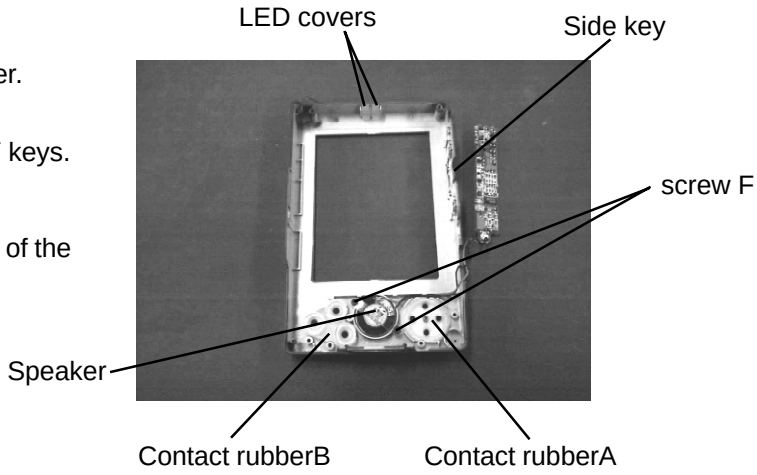


3. Remove 2 screw F's and displace Speaker.

4. Remove Contact rubber, Buttons, and XY keys.

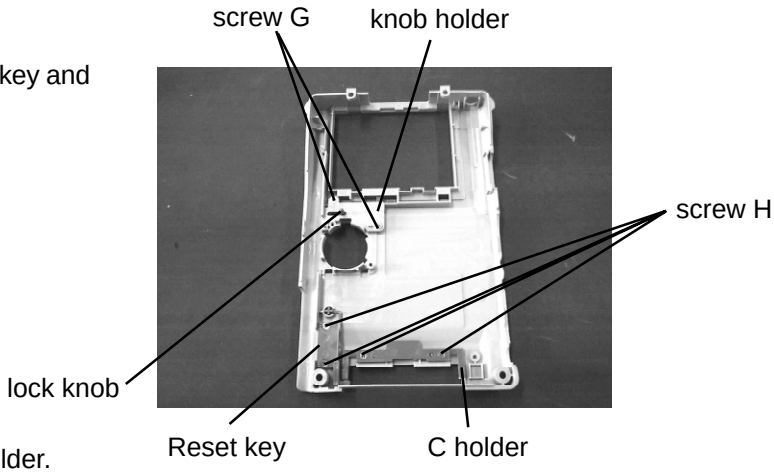
Note:
Do not remove Side key (located on the side of the case) unless it needs to be replaced.

5. Remove 2 LED covers.



■ LOWER CASE ASS'Y

1. Unscrew 2 screw G's and remove Reset key and CF lock knob.



2. Remove 2 screw H's and separate C holder.

3. Remove 2 screws and separate knob holder and Battery cover switch.

14. PARTS PRICE LIST
E-100/105
14-1.PCB ASSY, COMPONENTS and OTHERS

N	Item	Code No.	Parts Name	Specification	Q'ty		Price Code	R
					E-100	E-105		
	PCB ASSY/MAIN (C140837*2/*3)							
	1	6566 3850	SPRING/BATTERY	C342314-1	3	3	AC	C
	2	6566 3840	TAPE/SHIELD	C443236-1	1	1	AH	C
	3	6566 4660	TAPE	C443536-1	1	1	AA	C
	4	6566 4720	TAPE/INSULATION	C443588-1	1	1	AA	C
	D303	2370 1390	LED	SML-210LTT86M	1	1	AA	C
	CN200	2254 0553	CONNECTOR	HEC3650-012010	1	1	AG	C
	CN303	3502 2644	CONNECTOR	52271-0490	1	1	AA	C
	SW4	3412 2084	SWITCH	SLLB12-A-B-B	1	1	AN	C
	SW5	3412 1946	SWITCH	EVQ7QH03W	1	1	AB	C
	F200, F201	3632 0714	FUSE/CHIP	F0805B3R00FW	2	2	AD	C
	F202	3632 0711	FUSE/CHIP	F0805B1R00FWTR	1	1	AD	C
	VR301	3122 1302	RESISTER/CHIP SEMI-FIXED	MVR32HXBRN103	1	1	AA	C
	INNER CASE ASSY							
N	5	1001 2406	PCB ASSY/MAIN	C140837N*2	1	0	EK	B
N	5	1001 2407	PCB ASSY/MAIN	C140837N*3	0	1	EP	B
N	6	1000 3145	PANNEL/TOUCH	KTB97B002A	1	1	BW	B
	7	1015 1478	LCD MODULE	COM38T3103DPQ	1	1	EH	B
	8	6566 3690	CASE/INNER	C140810-1	1	1	AM	X
	9	6566 3700	PLATE	C342313-1	1	1	AE	C
	10	6566 3710	PCB ASSY/FPC	C342551*1	1	1	BE	C
	11	6566 3720	CABLE/JOINT	C443132-1	1	1	AD	C
	12	6566 3730	TAPE	C443237-1	2	2	AA	C
	13	6566 3740	TAPE	C443153-1	6	6	AA	C
	14	6566 3750	TAPE	C443182-1	1	1	AA	C
	15	3335 6831	PCB ASSY/INVERTER	HBL-0194	1	1	CL	B
	16	6566 3860	SPRING/EARTH	C443425-1	1	1	AC	C
	17	6566 4410	TAPE	C443559-1	1	1	AA	C
	18	6566 4420	TAPE	C443563-1	1	1	AA	C
	19	6566 4670	TAPE	C443583-1	1	1	AB	C
	20	6566 4680	TAPE	C443584-1	1	1	AA	C
	21	6424 3850	TAPE	A444176-1	1	1	AA	C
	22	6566 4700	TAPE/INSULATION	C443574-1	1	1	AA	C
	23	6566 4710	TAPE/INSULATION	C443575-1	1	1	AA	C
	LOWER CASE ASSY							
N	24	6566 4260	CASE/LOWER	C140809-2	1	1	AW	X
	25	6566 3640	HOLDER	C342321-1	1	1	AC	C
	26	6566 3650	KNOB	C342320-1	1	1	AB	C
	27	6566 3660	KNOB	C342319-1	1	1	AB	C
	28	6566 3670	KEY	C342326-1	1	1	AC	C
	29	6566 3680	HOLDER	C342370-1	1	1	AC	C

N	Item	Code No.	Parts Name	Specification	Q'ty		Price Code	R
					E-100	E-105		
	PCB ASSY/BACKUP BATTERY							
	30	6566 3760	PCB	C342334-1	1	1	AB	X
	31	6562 1331	SPRING/BATTERY	C442225A-1	1	1	AA	C
	32	6511 0770	SPRING/BATTERY	C311380-1	1	1	AA	C
	33	6410 4560	PLATE/INSULATION	C413459-1	1	1	AA	C
	PCB ASSY/KEY(C342426*1)							
	34	3335 6646	MIC	WM-64KY102	1	1	AM	C
	35	6562 1620	HOLDER	C442143-1	1	1	AA	C
N	36	6566 5630	TAPE/INSULATION	C443681-1	1	1	AA	C
	PCB ASSY/AUDIO(C342555*1)							
	37	3335 6828	SPEAKER	20D5	1	1	AV	C
	UPPER CASE ASSY							
	38	6670 2461	PCB ASSY/AUDIO	C342555*1	1	1	CN	B
	39	6670 2462	PCB ASSY/KEY	C342426*1	1	1	CQ	B
	40	6566 1650	NET/SPEAKER	C442768-1	1	1	AA	C
	41	6566 4692	HOLDER/SPEAKER	C442694B-2	1	1	AA	C
	42	6566 3540	CASE/UPPER	C140808-1	1	1	BQ	X
	43	6566 3550	KEY	C342322-1	1	1	AF	C
	44	6566 3560	COVER	C342318-1	2	2	AB	C
	45	6566 3570	KEY	C342323-1	1	1	AE	C
	46	6566 3580	KEY	C443150-1	1	1	AD	C
	47	6566 3590	KEY	C443151-1	1	1	AD	C
	48	6566 3600	KEY	C443152-1	1	1	AD	C
	49	6566 3610	RUBBER/KEY	C342324-1	1	1	AA	C
	50	6566 3620	RUBBER/KEY	C342325-1	1	1	AA	C
	51	6566 2310	TAPE	C442920-1	1	1	AA	C
	COMPONENTS							
	52	6566 3871	PEN SUB ASSY	C342013A*2	1	1	AK	C
N	53	6670 2543	PCB ASSY/ROM	C342554*2	1	1	BP	B
	54	6566 3480	COVER/BATTERY	C342327-1	1	1	AP	C
	55	6566 3490	COVER	C342317-1	1	1	AF	C
	56	6566 3500	COVER	C342316-1	1	1	AC	C
	57	6566 3510	COVER	C342315-1	1	1	AH	C
	58	6566 3520	FILTER/IRDA	C342328-1	1	1	AB	C
N	59	6566 4240	PLATE	C342432-2	1	0	AA	C
N	59	6566 5160	PLATE	C342432-3	0	1	AA	C
	60	6566 3310	BADGE/CASIO	C443357-1	1	1	AE	C
	61	6566 4430	SHEET/BATTERY	C443498-1	1	1	AB	C
	62	6566 4440	TAPE	C443560-1	1	1	AA	C

N	Item	Code No.	Parts Name	Specification	Q'ty		Price Code	R
					E-100	E-105		
	OTHERS							
	63	6566 3220	BOARD/CRADLE	C241325-1	1	1	AM	C
	64	3815 0822	CASE/SOFT	SCJ537AA01	1	1	AZ	C
	65	1001 0878	SOFTWARE/CD-ROM(MS)	CDJ530AA01A	1	1	BD	C
	66	3301 0448	ADAPTER/AC	AD-C50200U			BY	C
	67	3301 0468	ADAPTER/AC	AD-C50200CB	See to the		CH	C
	68	3301 0446	ADAPTER/AC	AD-C50200G	lower table.		CJ	C
N	69	3301 0469	ADAPTER/AC	AD-C50200A			CJ	C
		Refer to the lower table concerning these four adapters (Item 66~69).						
	70	3815 0820	BATTERY/ACCUMULATOR	CGP-E/104A	1	1	CZ	C
N	71	3335 6903	CD-ROM/MS AUDIO	CDJ530AA05A	0	1	AO	C
		CD-ROM of item 71 is enclosed in the unit shipped to U.S.A. and Canada.						
N		1000 2775	CD-ROM/MANUAL	CDJ530AA09A	1	0	AM	C
N	72	1000 9468	SOFTWARE/CD-ROM(CASIO)	CDJ530AA10A	0	1	AM	C
N	73	1000 2773	SOFTWARE/CD-ROM(CASIO)	CDJ530AA08A	0	1	AM	C
		Parts prices will be informed separately by Parts Price List.						

Notes:**N**-New parts

Q-Quantity used per unit

R-Rank

R- A:Essential
B:Stock recommended
C:Others
X:No stock recommended

ADAPTER

Item	Code No.	Specification	Shipment (Voltage)
66	3301 0448	AD-C50200U	U.S.A/ CANADA/ Others (AC100~120V)
67	3301 0468	AD-C50200CB	U.K./ Hong Kong (AC200~240V)
68	3301 0446	AD-C50200G	Europe except U.K./ Others (AC200~240V)
69	3301 0469	AD-C50200A	Australia (AC200~240V)

14-2. CRADLE

N	Item	Code No.	Parts Name	Specification	Q'ty		Price Code	R
					E-100	E-105		
N	101	6670 2541	CRADLE	C241388*2	1	1	CY	C
	102	6670 2472	PCB ASSY/CRADLE	C241390*1	1	1	CK	C
	103	3335 6733	CABLE	UJ0525#01-0	1	1	AZ	C
		Parts prices will be informed separately by Parts Price List.						

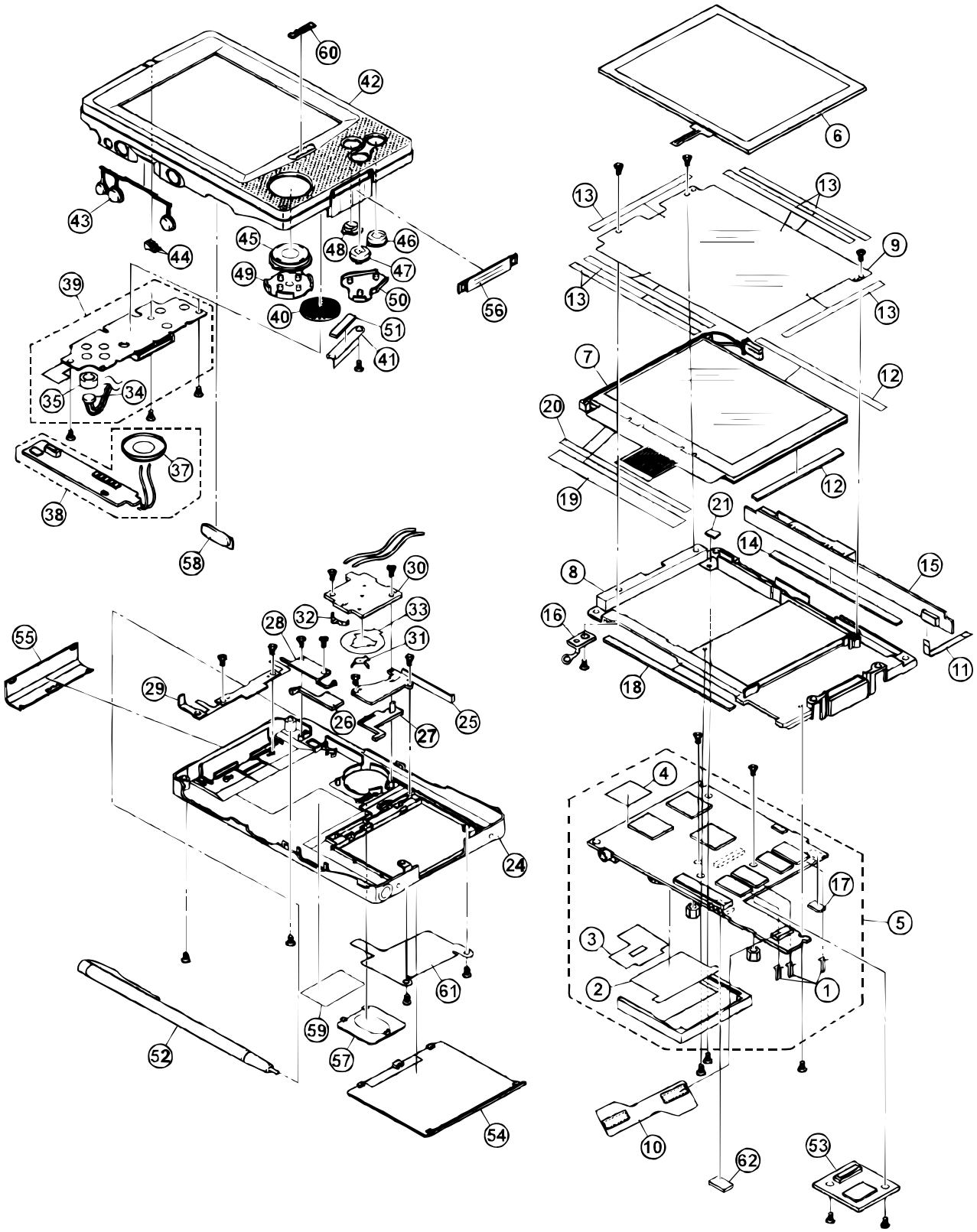
Notes: **N**-New parts
Q- Quantity used per unit
R- Rank

R-A:Essential
B:Stock recommended
C:Others
X:No stock recommended

15. EXPLODED VIEW

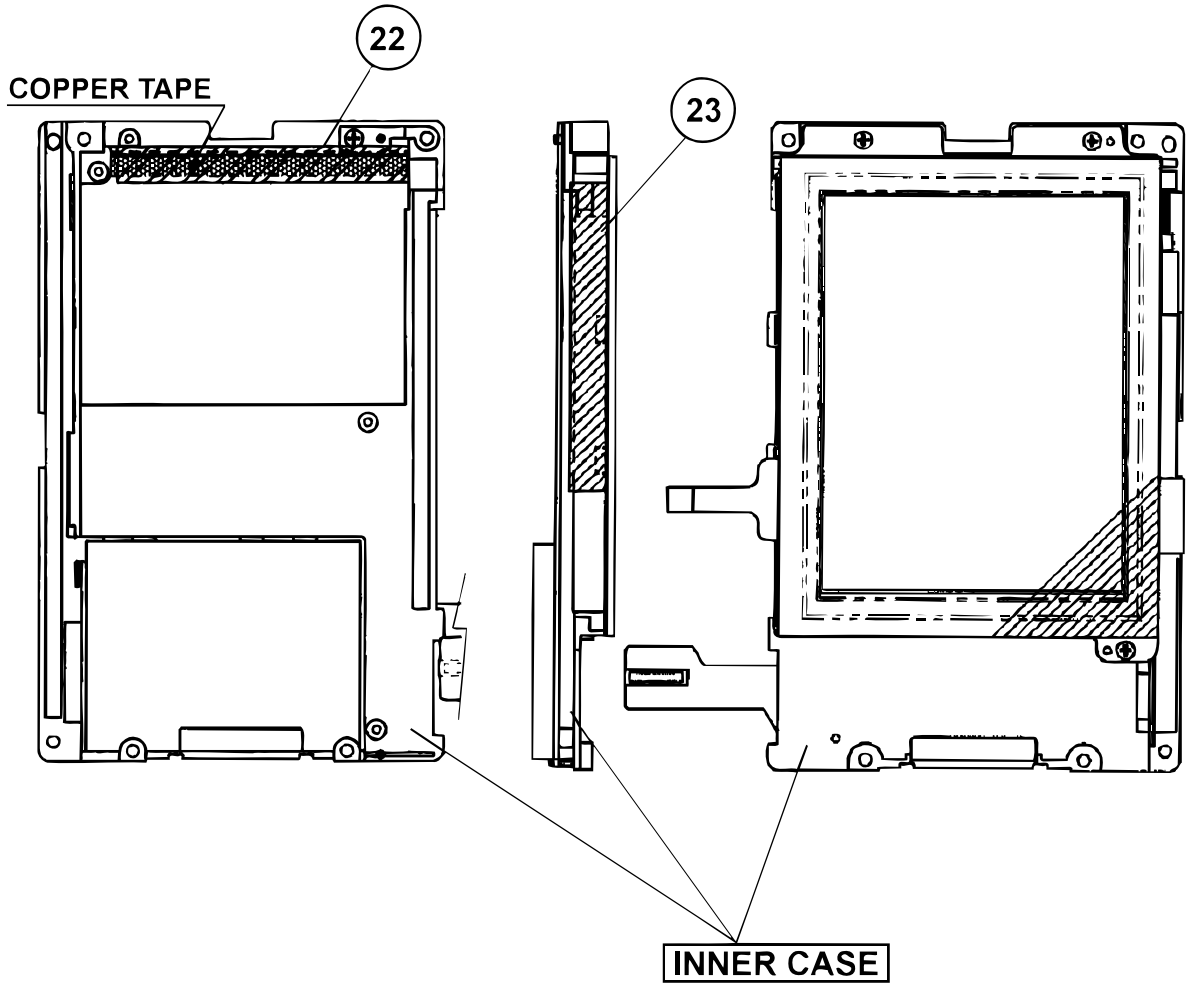
15-1. PCB ASSY, COMPONENTS and OTHERS (1/3)

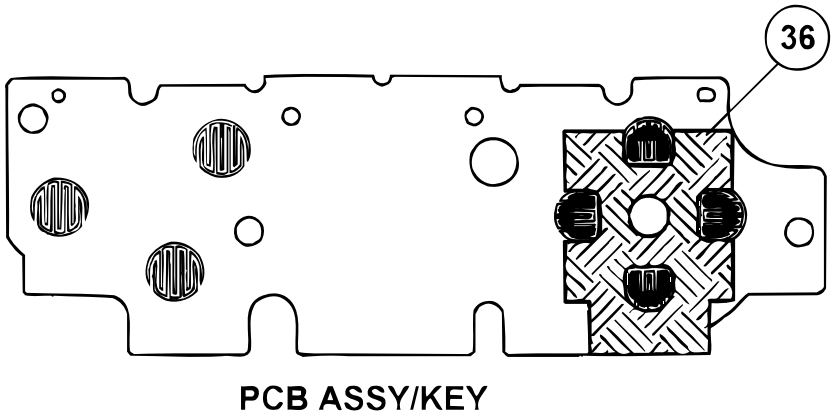
NOTE : Don't heap up item 5 (MAIN PCB ASSY) or put on a heavy object onto item 5 to prevent from clacks in D-RAMs. Item 17 does not be assembled onto item5.



15-1. PCB ASSY, COMPONENTS and OTHERS (2/3)

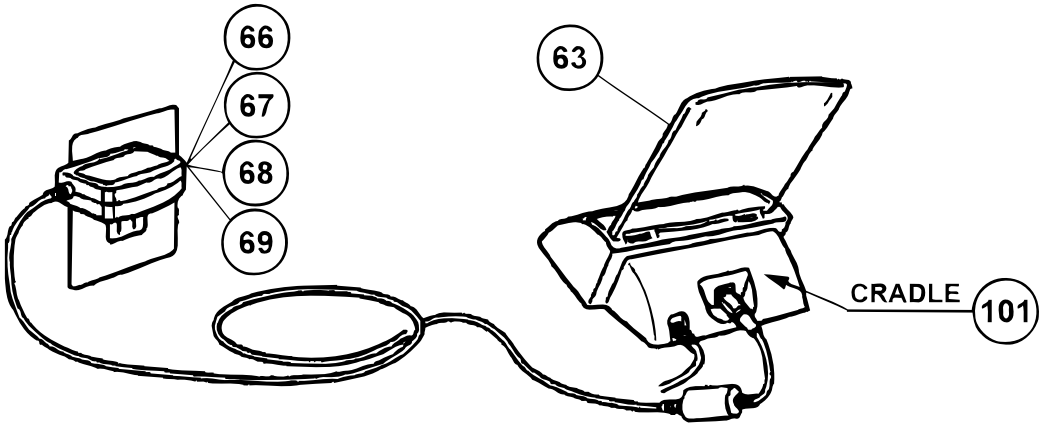
NOTE : Item 22 is assembled onto the copper tape to cover and blind it.

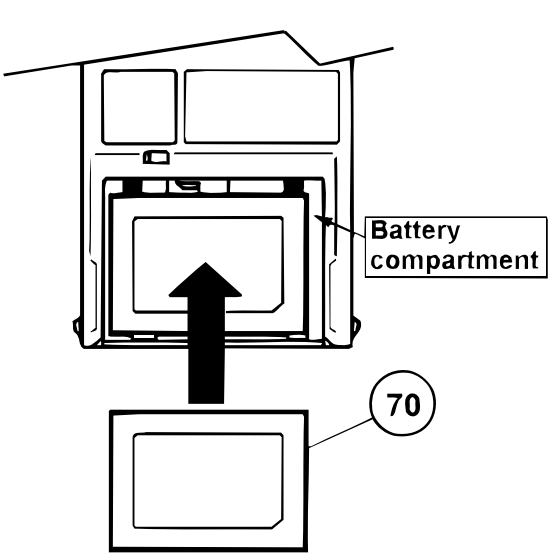


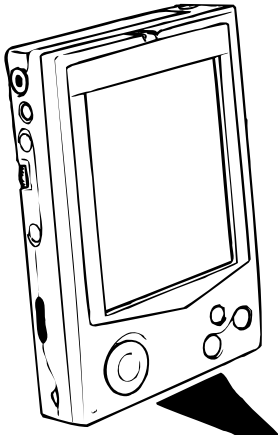


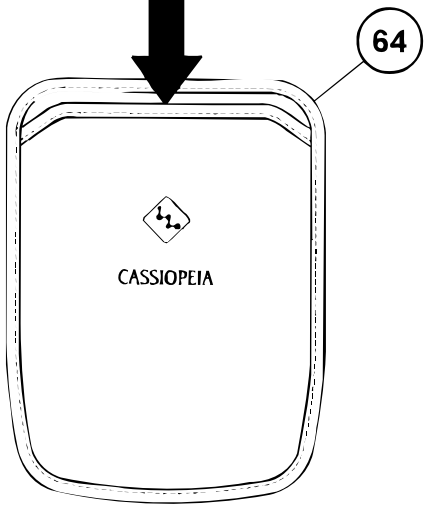
PCB ASSY/KEY

15-1. PCB ASSY, COMPONENTS and OTHERS (3/3)



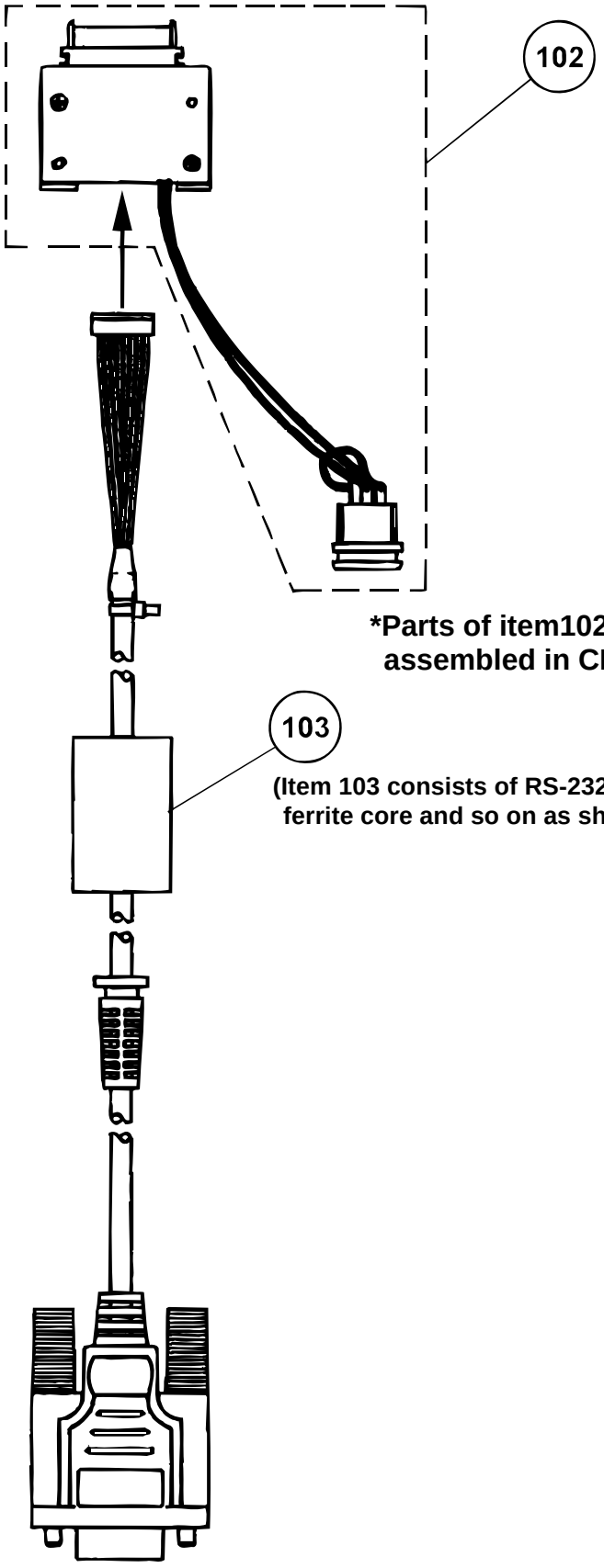






The following title is printed;
Microsoft Windows Media
Music Sampler for the CASIO E-100 & E-105

15-2. CRADLE


102
*Parts of item102/103 are assembled in CRADLE.
103
(Item 103 consists of RS-232C cable, connector, ferrite core and so on as shown to the left)

Ver.1 : (1) Additional item **7-4.New (Second) version Diagnostic Program Rev. 0.50** to **7.OPERATION CHECK**

(2) Deletion of page 54 ~ 56 in the first Edition Manual

(3) Additional spare part (Item 73) to **PARTS LIST**, Additional explanations on page 62 and Modification of Applicable models on page 62

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